THE
MEDICAL AND SURGICAL
REPORTER.

No. 1937. PHILADELPHIA, APRIL 14, 1894. Vol. LXX—No. 15

ORIGINAL ARTICLES.

THE SURGICAL USE OF COCAINE.

B. MERRILL RICKETTS, PH.B., M. D., Cincinnati, O.

I look upon cocaine as the greatest acquisition to the list of anæsthetics since the day of their discovery.

That it is in a measure dangerous cannot be denied, but as all powerful and useful drugs are more or less dangerous, we must console ourselves with the thought that a certain class of surgery and its good results could not be accomplished without them.

Admitting then that it is dangerous, even in the hands of those most skilled in its use, we are all the better prepared to rely implicitly upon its effects in producing anæsthesia for operations where it is desired not to produce unconsciousness.

What can be more dangerous than unconsciousness from any cause other than natural sleep?

Yet there are certain individuals whom it is better to make unconscious than to subject them to the fright which often attends operations, especially if the operation is to be grave or prolonged.

I have found that a few persons are not very susceptible to the effects of cocaine, while others are very much so. While this is the case, I do not believe that the effects are as have been reported, instantaneous. No more so than the effects of strychnia, atropia or morphia.

Such cases I consider nothing more than fright or ordinary faint. It is a physiological impossibility for a person to fall unconscious instantly upon the application of cocaine to the system in any way, especially if that person be in a normal physical and mental condition at the end of fifteen minutes from the time of its application.

There are more means of determining the safe application of cocaine than of chloroform or ether, and I believe that the bad results from the use of cocaine are to be more attributed to the operator than are the bad results of chloroform or ether. This I believe is due to the fact that physicians are not so familiar with the use of cocaine, and the exceeding uncertainty of chloroform and ether.

The amount that I have used in a given operation has varied from one-eighth to seven-and-one-half grains. The latter amount was used in a plastic operation for the restoration of both the left lower eyelid and right upper lip. This was in a case referred to me by Dr. D. D. Bramble and the amount was consumed within one and one-half hours.

The pulse reached 120 and respirations 24 per minute, but nothing more unpleasant arose.

On the other hand I have had the most alarming symptoms following the injection of but three-quarters of a grain (Merk's crystals) into the lower lip for the removal by cautery of an epithelioma.

This was in the case of a man age, 69, of a highly nervous temperament. The excitement was intense; the pulse 140 and respiration 30 per minute; he was generally discomboberated without unconsciousness or delirium.

He yelled at the top of his voice; pounded the couch, myself and assistant, Dr. Spargur. Talked rationally and expressed his chagrin that a man as old as he was should make a fool of himself, he also added that his condition was about the same as when he was drunk at the age of twenty.

Quietude was soon established and he was entirely over the stimulating effects at the end of one hour and a half.

In this case the symptoms were more aggravated than any of the six cases of poison that I have encountered among the one thousand in which I have used cocaine.

The other cases manifested similar symptoms, but very much less severe, but one, however, having delirium and none unconsciousness.

I have found that primary union is, with cocaine as with all local anæsthetics, less likely to take place. This may be accounted for, perhaps, by the hemorrhage poured out from the capillaries that have become dilated as the secondary effect of the cocaine. The first effect is to contract the capillaries which afterwards become over dilated, and thus allows hemorrhage to take place, which prevents union.

This has also been charged to the use of chloroform and ether.

I have used cocaine without a slough in the following operations, thus showing the very broad range of surgery in which it has been personally applied:

1. Circumcision.
2. Cutaneous tumors.
3. Subcutaneous tumors.
4. Varicocele (open operation.)
5. Hydrocele (removal of sac.)
6. Tubercular Glands.
7. Phymosis.
8. Periphymosis.
9. Internal Urethrotomy.
10. Removal of Ingrowing Nails.
11. Fistulæ (Sundry)
12. Hemorrhoidal Operations.
13. Amputation Finger and Toes.
14. Tenotomies.
15. Plastic Operations.
16. Incising Abscesses.
17. Neurectomies.
18. Neurotomies.
19. Preparing Surfaces for Grafts.
20. Removing Grafts.
21. Anæsthesia for Cautery and Caustic.
22. Amputation of Scrotum.
23. Removal of Testicle.
24. Ligation of Varicose Veins.
25. Exploratory Incision for Bone Disease.
26. Removal of Bones of the Feet and Hands.
27. Removal of Bone Spiculæ.
28. Removal of Foreign Bodies.

In conclusion I would offer the following *maxims.*

1. Solutions should not be made except at time of operation.
2. Cold water solutions will add materially to the good effects of the cocaine.
3. An operator should accustom himself to but one kind of cocaine and confine himself to the use of that kind as he does chloroform.
4. The operator should prepare the solution himself and not entrust it to an assistant.
5. Only small amounts should be used especially in the young, the old and in highly nervous persons.
6. Small quantities should be used in operations upon the face, head and neck.
7. Operations should be made as soon as possible after the area has become anæsthetised that as much as possible of the solution may escape through the wound and thus not enter the general circulation.
8. The finest needle should be used, and it's length should be sufficient to traverse the line of incision intra-cutaneously with but one puncture.
9. Intra-cutaneous and not subcutaneous injections should be made, because there is less of the drug absorbed and because there is no pain to result from cutting tissue beneath the integument.
10. The nearer the injection is to the end of the member the less is the amount of absorption.
11. The prepuce, fingers, toes, hands and feet can be constricted in such a way as to present to a considerable degree the entrance of the solution into the general circulation.

MRS. UPPERCRUST—"You go abroad a great deal lately, do you not Mrs. Newmonie?"

Mrs. Newmonie—"La! yes, my dear. Why, we're in Paris so much lately that I call us reg'lar Parisites!"—*Vogue.*

THE EXTRACTION OF FRAGMENTS OF IRON FROM THE VITREOUS BODY WITH THE MAGNET.

F. C. HOTZ, M. D., CHICAGO, ILLINOIS.

The vitreous body of the human eye is an exceedingly sensitive tissue; it is very quickly affected by any disturbance of nutrition and it is very slow in the repairing of its deranged texture. After any injury therefore, it is apt to waste away, to shrink and seriously impair the functions of the eye. On account of this great sensitiveness of the vitreous the removal of foreign bodies with forceps or scoops, which instruments necessarily caused considerable derangement of its texture, was usually followed by so disastrous results that it was seldom attempted, and that the presence of a foreign body in the vitreous was generally regarded as equivalent to the loss of the eye.

It was, therefore, a most happy idea of Dr. McKeown, of Belfast, in 1874, to employ for the extraction of an iron chip, a magnetic probe which through a scleral incision was slowly passed into the vitreous down to the foreign body, and the iron attracted by the magnetism was found attached to the probe when this was withdrawn from the eye. As the probe passed in and out over the same route it caused but very slight derangement of the vitreous and the eye recovered so well that the patient was able again to read small print.

Dr. McKeown's instrument was a simple bar magnet, 8 inches long and 1-8 inch thick tapering off to a point at both ends. And though since then the ingenuity of men has furnished us with instruments much superior to his, both in power and shape, his merits remain undisputed of having opened a new field for ophthalmic surgery.

There are now two kinds of instruments in use, the *permanent magnet* and the *electro-magnet*.

As an excellent representative of the first kind I show you here the permanent magnet constructed by Dr. Gruening, of New York, in 1880, and will describe its construction by the inventor's own words.* "I joined several magnets into a bundle, thus making a powerful magnetic magazine. * * * The two extremities of a number of magnetized steel rods placed parallel to, and at a little distance from each other, are fitted into iron caps one of which is provided with a delicate point of malleable iron; 32 mm. long, 1 mm. wide and 0.3 mm. thick. This point is powerfully magnetic, sustaining with ease, a weight of 15 grammes. Chips of iron weighing from 1 to 50 centigrammes, when placed into the vitreous of recently enucleated animals eyes, are attracted toward the point at a distance of 1 to 5 mm., and withdrawn with the greatest facility." When not in use the point is screwed off and the magnet placed in an iron frame to preserve its magnetic power.

When we consider that the weight of the particles of iron found in the vitreous body seldom exceed one centigramme, we must admit that Gruening's magnet is certainly powerful enough for the purpose. It has also the advantage of great convenience; for it is light, easy to manipulate, portable, and ready for use at any time and in any place. The only faulty point which has been urged against this instrument, is that it gradually loses power. But while admitting this fact, I can easily convince you by a *demonstratio ad oculos* this loss of power is so infinitely small that it can scarcely be appreciated even after many years. This magnet was bought in 1881, and as you see still lifts this key weighing nearly half an ounce. And then should the instrument become actually too weak, the steel rods can be remagnetized by an electric company at a very small expense.

In the electro-magnet—as the name indicates—the magnetism is developed by an electric current circling round a piece of malleable iron. Its use, therefore, requires a battery and connecting wires, and its efficacy is entirely dependent on the perfect working of the electric apparatus. All this makes the electro-magnet a more complicated and cumbersome instrument than Gruening's magnet; nor is it as convenient as the latter, because whenever you wish to use it you have to have a battery with you. The only thing in its favor is its greater power; but I dare say a fragment of iron which a good Gruening mag-

*New York Medical Record May 1, 1880.

net cannot extract from the vitreous, will not be brought out by the more powerful electro-magnet.

I am free to make this assertion upon the ground that the electro-magnet has proved a failure in the hands of our surgeons under precisely the same conditions under which I was unable to extract the small particle of iron with a Gruening magnet in the following case:

Fragment of iron, weighing 2 milligrammes, in the vitreous one week; vitreous cloudy, but iron visible; magnet failed; eye enucleated.

The bit of iron had entered the eye by the sclero-corneal border and without wounding the lens had made its way into the vitreous. At the time of the examination, one week after the accident, the eye was considerably inflamed but still could count fingers; the pupil readily dilated under atropine and the lens was quite clear; the vitreous was hazy, the obscuration being decidedly more pronounced on the temporal than on the nasal side; and in the denser temporal cloud a bright shining body could be seen with the ophthalmoscope. An incision was made through the tunics of the eyeball below the external rectus muscle, and the point of Gruening's magnet was introduced in the direction where I had located the iron scale. But repeated efforts with the magnet were unsucessful and finally I had to enucleate the eye. Immediately after enucleation I removed the cornea, iris and lens, being careful not to disturb the vitreous, and I could trace the track the magnet had left in the vitreous, from the scleral incision straight on to the foreign body, a minute scale of iron. It was, therefore, evident the point of the magnet had undoubtedly been in contact with the iron fragment, but why then did it not bring it out? This question was answered by the following experiment: I again introduced the magnet through the scleral incision and slowly passed it along the visible track in the vitreous toward the foreign body, and when it was yet one millimetre from the iron this jumped and clung to the point of the magnet; and when the latter was slowly withdrawn the iron followed it for a distance of 2 or 3 millimetres; but then it suddenly sprung back to its former place as if forcibly jerked back by an elastic string. This experiment was repeated several times and always with the same result. The whole vitreous was opalescent, but around the metallic scale it was streaked with white fibrinous strings which held the foreign body so firmly within their grasp that when I tried to remove it with the point of a scalpel, the whole vitreous was lifted up, and it required considerable traction to break these resisting bands. It is obvious that against such resistance any magnet would have been powerless.

Under much more favorable conditions and with very good results was the magnet employed in the following two cases:

Case I. *Chip of steel, weighing 9 milligrammes, in the vitreous 24 hours; magnet successful; good vision restored.*

The steel entered through the sclera 6 millimetres from the nasal margin of the cornea and could be plainly seen with the ophthalmoscope in the center of the vitreous. The small wound in the sclera was enlarged, the point of Gruening's magnet introduced in the proper direction, and on the second attempt the chip of steel was brought out. The conjunctiva was closed over the scleral wound by a fine silk suture, and both eyes were bandaged for 5 days. The recovery was very rapid and one month later the sight was almost normal.

Case II. *A scale of iron, weighing 3 milligrammes, in the vitreous ten days; magnet successful, eye recovering with traumatic cataract.*

This case is remarkable for the unusual tolerance shown by the eye to the pressure of the foreign body in the vitreous, inasmuch as after ten days there were no signs of inflammation. The small scale of iron had entered through the cornea and made its way through the temporal portion of iris and lens into the vitreous where it could be seen as a bright shining body though the lens was already partly opaque. It was successfully extracted with the electro-magnet through a scleral incision, and the eye made a quick recovery, but the lens, of course, became entirely opaque.

It is evident the operation promises the best results if it is undertaken at a very early period, before the iron has been enveloped in a dense exudate, and before the lens or the vitreous or both have become so cloudy as to render an ophthalmoscopic examination impossible.

You have seen that the movableness of the iron fragment is an indispensable condition for the success of the magnet operation; and another condition almost as essential is this, that the foreign body can be seen, or at least located, with reasonable accuracy. For if we do not know its location in the vitreous we are truly and literally fishing in the dark and trusting to good luck to find it. But "luck" is an element we should not reckon with in surgical operations. In 33 cases where the fragments could not be seen in the vitreous and the surgeons "went it blind and for luck," the iron was extracted in 14 only, while the operation was successful in 13 out of 15 cases in which the foreign body could be seen; and the two pieces which could not be extracted, were found to be embedded in the retina.

But before we decide upon the magnet operation we have not only to consider the question whether the chances are favorable for the extraction, but we should also consider the far more important question whether we have good and sufficient reason to believe that the removal of the foreign body will save the eye. I, for my part, at least, have always taken this position, that the operation is not performed for the purpose of proving the possibility of removing particles of iron or steel from the vitreous, but that its ultimate aim is the preservation of the eye either as an organ of vision, or, at least, for its cosmetic value; for every one would rather keep his own eye though it be blind, than to wear an artificial eye. Always acting on this principle that the operation was to benefit the patient, I could never persuade myself to undertake it on an eye in which the lesion was so serious, or the inflammation induced by the foreign body so violent and extensive, that I was convinced disfiguration and atrophy of the eyeball would be the inevitable result even should I succeed in extracting the particle of iron. What satisfaction can it be to the patient to know the iron was successfully extracted with the magnet if his eye does not recover, or has to be enucleated soon afterwards for fear it would cause sympathetic inflammation of the other eye? Is it not more rational, is it not far better for the patient as well as the surgeon under these circumstances to abstain from the magnet extraction and to remove the eyeball at once.

We have already learned the magnet operation is not always successful; we have seen it fail to extract the iron or steel in 21 out of 48 cases which I found reported in the journals. But if now we examine the reports of the 27 successful extractions in order to find out how many patients receive a lasting benefit and what the condition of those eyes was, which were actually saved by the operation, we receive the following information. In 6 cases the operation was done very soon after the accident before inflammation had set in, and all 6 eyes recovered. Of 13 eyes which showed a moderate degree of inflammation and more or less haziness of the vitreous, 10 were saved; but of 8 eyes with violent inflammation and cloudiness of the vitreous none could be saved, they all had to be enucleated because the irido-choroiditis continued although the foreign body had been removed. These results sustain my opinion of the impropriety of operating on an eye in the advanced stage of inflammation. But I am well aware these views are not shared by all surgeons. For among those 48 cases in which the magnet had been tried, I found a goodly number of eyes which manifestly were in a hopeless condition before the operation; eyes with their tunics extensively lacerated; eyes with the vitreous chamber filled with blood; and eyes showing the signs of atrophy, that inevitable consequence of severe traumatic irido-choroiditis. To operate on such eyes is, in my opinion inexcusable, for neither science nor the patient can gain by it. But for some surgeons the presence of a piece of steel or iron in the vitreous seems to be a sufficient indication for the use of the magnet, no matter what condition the eye is in—because in their anxiety to increase the list of their operations they sometimes forget that the welfare of the patient should always take the first rank in all our deliberations and actions.

Assyrian Records.—Layard, in his "History of Nineveh," mentions that the national records of the Assyrian Empire were written on bricks in characters so minute as to be scarcely legible without the aid of a microscope, and that, in fact, a variety of this instrument was found among the excavations.—*Boston Commonwealth.*

COMMUNICATIONS.

THE IMPORTANCE OF EARLY RECOGNITION AND TREATMENT OF OBSTRUCTIVE DISEASES OF THE UPPER RESPIRATORY TRACT.*

JOSEPH S. GIBB, M. D.,† PHILADELPHIA.

The introduction of a subject so time-worn and stale might require an apology were it not that notwithstanding there is a plethora of literature there still remains a singular indifference and lack of appreciation of the merits of the matter in the minds of the general practitioner. Doubtless much of this is due to the very voluminous character of the literature, which tends rather to interest those for whom the subject has an especial attraction. We read much of the histological structure of the various hypertrophies, and numerous are the instruments introduced for their destruction. We read less of the best means of demonstrating their existence, the etiological factors concerned in their production, and the prophylactic measures which may be adopted to prevent their development.

Perhaps no single abnormal condition is productive of more marked alterations in physical beauty and healthy functions than diseases producing obstruction in the upper respiratory tract. The anxious and watchful mother views with sorrow the freckling or tanning of her child's face. How much more disagreeable than these are alterations in the facial lines to such a degree as to cause a face to be expressionless; and when to this is added partial deafness, with all its unpleasant effects, we have a picture which any careful mother should strive to avoid. Were as much care bestowed on the important functions of the nasal chambers as is generally given to the skin or other tissues more directly under the eye, we would have fewer of these unpleasant pictures. Nor is this marring of physical beauty the sole deleterious result of these conditions, it can be proven that serious and perhaps grave interference with important functions follow in its wake.

In order to have a proper appreciation of the importance of the subject we will review for a moment, and in a cursory manner, the anatomical structure and physiological purposes of the nasal chambers and their contiguous structures.

The bony nasal chambers consist of three scroll-like bodies, the turbinate bones, two of which, the middle and inferior, are accessible in the living subject, which form the sides of the chamber. A septum, separating the nasal chambers, which is reinforced by a plate of cartilage in the recent state. These turbinated bones divide the nasal chambers into three meatuses—superior, middle, and inferior—into which open the various sinuses or foramina which communicate with the accessory cavities—namely, the frontal sinus, the ethmoid and sphenoid cells, the antrum of Highmore, and also the lacrymal duct. All these structures in the living subject are covered with mucous membrane well endowed with bloodvessels and nerves, whilst over the turbinate bones the tissue is erectile or cavernous.

The situation of these chambers, the peculiar construction of the bones, the unusually large surface of mucous membrane for so small a cavity, and the very generous blood-supply, bespeak important functions. Bosworth claims three: (1) the first and very important function in respiration; (2) an aid in phonation by acting as a resonant chamber; (3) as an olfactory organ.

The atmospheric air as it passes through the nasal chambers is brought in contact with a comparatively large surface of mucous membrane which is rendered warm by the free blood-supply and moist from the secretion of the numerous mucous glands therein contained. The effect of this contact is first to abstract from the air

*Read before Philadelphia County Medical Society, March 14, 1894.

†Instructor in Laryngology in the Philadelphia Polyclinic; Surgeon-in-charge of the Ear, Nose, and Throat Department of the Episcopal Hospital, Philadelphia.

dust and other foreign bodies, and secondly to add to the inspired air warmth and moisture. This latter function is most important. It has been computed that over 7000 grains of water are expired from the lungs in twenty-four hours; and Aschenbrandt has demonstrated by a series of carefully conducted experiments that the source of this moisture is in the nasal chambers.

From this brief and very imperfect glance at the anatomical position and functional purposes of the nasal chambers we may draw a few important lessons. Interference with the proper and easy inspiration of air through the nasal chambers is productive of diseased conditions, not alone of those organs themselves but of the more important respiratory structures within the chest.

It cannot be doubted that inspiration of air into the air vesicles imperfectly warmed, deprived of the moisture which Nature intended it should have, must exercise a deleterious influence on the delicate mucous membrane lining these cells. I am not ready with statistics to prove the relationship between pulmonary and bronchial affection and obstructive diseases of the upper air tract, nor do I deem it necessary, for it is a matter of common experience and observation that those children whose nasal chambers are obstructed either directly by hypertrophies, polyps, etc., or indirectly by hypertrophied pharyngeal or faucial tonsils, are sunken-chested, prone to attacks of acute bronchitis and coryza, and in many respects are less healthy than other children. I am well aware that these conditions are often the result of a constitutional vice which in itself renders the subject less robust, still I am more than ever convinced that removal of the local effects of this diathetic condition results more effectually in a return to a normal condition than any plan of treatment directed solely to the condition itself. Nor is it alone the respiratory tract that suffers from these abnormal states. I have before remarked that children so afflicted are apt to be in a condition of poor health generally, and it has occurred to me that perhaps this may be not entirely due to the diathetic condition which is so frequent a concomitant, but rather that the lungs, being supplied constantly with a vitiated air, *i. e.*, air insufficiently warmed and moistened, failed to supply the blood with a healthy, proper pabulum and hence the tissues suffer. Be the explanation what it may, we must not lose sight of the fact that a condition of ill health frequently does exist and we should bend our energies to ascertain the cause and seek its remedy.

It is not the object of this paper to elaborate on the various methods of treatment, but rather to inquire into the causation and to endeavor to point out means which may be taken to ameliorate the conditions existing and to prevent the development of more serious ones. Especially is it desired to inquire into the causative influences of obstructive diseases of the upper air-passages in young children.

Eliminating all those effects of imperfect or perverse fœtal development such as occlusion of anterior or posterior nares, cleft palate, etc., we have conspicuously prominent in the catagory of obstructive lesions in the upper respiratory tract hypertrophic conditions of the turbinate bodies, of the pharyngeal, faucial, and to a lesser degree the lingual tonsil.

A glance at the records of any of our large throat and nose clinics will convince one that these abnormal conditions are far from rare; nor does even this showing give us a thoroughly accurate conception of their frequency. Too common is it to ignore or carelessly treat the various catarrhal symptoms presented to us, and this indifference on the part of the profession has led to a corresponding indifference on the part of the laity, so that only those cases of pronounced obstruction are brought to the notice of the general practitioner. Were the nasal speculum used as freely as the stethoscope or clinical thermometer we would be astonished at the result. Again, certain hypertrophic conditions have but comparatively recently received any measure of attention from the profession. Though faucial hypertrophies have been observed and studied from remote times, it was not until a very recent date that Meyer gave to the profession a clear idea of the significance of hypertrophic conditions of that collection of adenoid tissue at the vault of the pharynx known as the pharyngeal tonsil; nor is the importance of the subject to-day appreciated by the rank and file of the profession, notwithstanding that much has been written about it and many instruments devised for its removal. Situated

as it is in a somewhat inaccessible or rather unobservable portion of the upper pharynx, it is only by the use of the rhinoscope that its presence can be clearly demonstrated; this being the case it is patent that it must be frequently overlooked.

With these facts before us it is clear that, whereas our clinics show us that these states are common, they give us no adequate conception of their prevalence.

At the clinic of the Episcopal Hospital it is the custom to carefully examine the nasal cavity, the pharynx, and post-nasal surfaces in every case that applies for treatment, irrespective of the fact that the subjective symptoms point to lesions in this or that locality; and in children of tender age, where a rhinoscopic examination is not feasible, if there is any suggestion of disease in this locality a finger is introduced back of the soft palate and over the vault of the pharnyx to demonstrate by tactile sense the presence or absence of any abnormality. It is surprising as a result of this procedure to note the number of cases in which there are lesions of the upper pharnyx of which the symptoms have been overlooked by the parents.

In considering the etiology of these hypertrophies it is as well to treat of them collectively, for whereas they are often separate and distinct lesions and exist independently, they are often associated and their etiology, so far as our knowledge goes, is in many respects similar.

In the case of the glandular tissue there can be no doubt that in a few instances these hypertrophies are congenital, doubtless the effects of an inherited vice—syphilis or scrofula—carrying out the well-known tendency of these dyscrasiæ to affect lymphatic and glandular tissue. Though this view is combated by no less authority than Meyer, who leans to the view that it is always an inflammatory process in a tissue which normally is largely developed in infancy and childhood, at the same time it is difficult to explain the presence of this state in very young infants unless we presume this inflammatory process to have taken place during its prenatal existence. Those cases developing subsequent to birth donbtless have as a starting-point an inflammatory or catarrhal origin.

We have demonstrated the frequency of hypertrophies of the glandular tissues and turbinates in children, and have admitted a few cases may be congenital, which leaves the vast majority to have its development subsequent to birth; and as it is our belief that its causation lies in some condition outside of the child, at least, in part, it is now our endeavor to seek out those causes and, if possible, lay down certain laws looking to their eradication or, at least, amelioration. Here as with many other diseases of insidious approach, an early recognition is productive of much good.

Among the general causative agencies which it is not entirely within our power to relieve, may be mentioned atmospheric conditions incident to residence in temperate climes, and especially near the seaboard; the method of heating houses in cities by dry air frequently derived from an unsanitary source; carelessness in the dressing of infants and trusting them too much to the care of servants who unnecessarily expose them. All these and others exercise an influence in the production of the disease, but only in a general way. The prophylactic remedies are obvious and suggest themselves.

The various catarrhal conditions which the above enumerated disturbing influences of our environment occasion, are of much importance from an etiological standpoint. There can be no doubt that it is here we have the starting-point of the hypertrophic process. A simple coryza is neglected; the child is not even protected from the causes which produced it—the result, one coryza succeeding another the entire season. The effect of a long-continued inflammatory process is precisely the same in the nasal and pharyngeal tissues as in the other tissues of the body—namely, increase in the connective-tissue growth, increase in the cellular growth. And it is just here by a knowledge of the effects that the family physician's advice and counsel can be of so much value and save so much misery and suffering to the child—so much mental anxiety and mortification to the parents. I believe that parents should be taught that a coryza is by no means so simple or harmless an affair as is commonly believed. It is better to err on the right side—better by far to give some attention (possibly needless) to a few attacks of coryza than to sit quietly by doing nothing and permitting the production of obstructive masses in the upper air-passages that

may alter the child's expression and possibly injure the health.

Parents should further be taught that repeated coryzas indicate a diseased condition of the nasal or pharyngeal mucous membrane demanding prompt and thorough treatment. The physician should himself insist on a careful examination aided by the speculum and rhinoscopic mirror, and should lay down a plan of treatment which his ingenuity will suggest, and persevere with it until the conditions yield; and I believe in this way, and in this way alone can we hope to have any measure of success.

Conspicuous in the category of special causative agencies may be mentioned the eruptive diseases of childhood, and especially those in which the fauces and nasal chambers are involved in the diseased process. Foremost among these may be mentioned diphtheria. The well-known tendency of diphtheritic processes to attack glandular tissue is well exemplified in the post-nasal spaces. We are familiar with the appearance of the diphtheritic membrane on the tonsils, but usually the examination of the other mucous surfaces is not made, and we remain in ignorance as to the extent of this process into the nasal chambers and vault of pharynx. Doubtless if careful examination was carried out in every case we would find the proportion in which these structures are involved to be very large. I have no doubt that many of the cases of so-called re-infection are in reality those in which there has been an involvement of the pharyngeal tonsil in the diphtheritic process. When an examination of the tonsils reveals an absence of the familiar membrane and a subsidence of the inflammatory condition, we are lulled into a sense of security and perhaps relax in our vigilance unmindful of the fact that the disease is perhaps making insidious inroads at a spot beyond our unaided view. However, we are not concerned with this at present; sufficient is it for us to know the extreme susceptibility of the mucous surfaces in this disease.

After the subsidence of the diphtheritic process it is very common to have a catarrhal condition continuing for a considerable period; this is especially noticeable in cases in which the nasal mucous membrane has been implicated; though it frequently occurs where there has been no perceptible involvement of the nasal chambers, and I believe it is just in these cases that there has been a diseased process going on at the vault of the pharynx. The explanation of this mucous discharge and other evidences of a catarrhal condition is doubtless due to alterations in the nutrition of the part, in consequence of the high grade of inflammatory action, and also to septic absorption. Were an examination made at this time we would likely find a hypertrophic condition either in the nasal turbinates or the pharyngeal and faucial tonsil. Though doubtless the majority of these cases do well without any special treatment directed to the part, yet in a certain number the catarrhal condition persists, and especially is this likely to occur in those children who seem prone to catarrhal states, and the foundation is laid for the formation of masses of hypertrophied tissue.

The beneficent offices of the family physician can be here admirably employed. It is not wise to pass over lightly the persistence of a catarrhal state after the subsidence of the inflammatory symptoms. Treatment employed at this time and persisted in until an amelioration takes place, can be productive only of good.

Scarlatina, as is well-known, expends at least a part of its energy on the mucous membrane of the fauces; though, unlike diphtheria, rarely involves the nasal chambers. Here the inflammatory action is so high, often to the production of false membrane, as to exercise a baneful influence upon the nutrition of the tissue and aid in the production of hypertrophies. We are all familiar with the fact that hypertrophies of the faucial tonsils are a frequent sequela of this disease. The same process that gives rise to hypertrophies in this tissue is at the same time exerting its influence on the tissues of the vault.

It is needless to dwell on this; the too familiar sight of catarrhal conditions as sequelæ of scarlatina precludes any argument to the contrary as to its position as a causative agent in the conditions under consideration. Nor is it hardly necessary to refer to the necessity for prompt treatment—one word, however on this point. It seems to me an imperative duty on the part of the medical attendant to insist on an examination, and if necessary subsequent treatment in every case where a ca-

tarrhal condition evidenced by a mucous or mucopurulent discharge from the nose, a thick voice, and mouth-breathing persists, after all evidences of the exanthemata have passed away.

Measles, though commonly regarded as a light and insignificant disease, is exceeding apt to leave some trace of its existence. The explanation of this is evident. Not commonly menacing life, it is, however, very active in its attack, and this activity is exerted on the mucous surfaces in the entire respiratory tract. Mothers should be informed of the fact that with care the course of the disease will be benign, but without it there is extreme probability of a catarrhal affection with all its unpleasant consequences being left as a sequela. And here, as with others, active treatment should be insisted upon if the catarrhal symptoms persist after the subsidence of other evidences of the exanthemata.

The other exanthemata and febrile diseases, such as rötheln, variola, varicella, typhoid fever, etc., exert a certain amount of influence as causative agents, but only in a general way, as any alteration in health will do. The diseases mentioned, viz., diphtheria, scarlatina, and measels, exert a special influence because the diseased condition seems to expend itself on the mucous surfaces, producing alterations and perversion of function.

The clinical picture presented by sufferers from obstructive diseases of the upper respiratory tract is absolutely characteristic, and especially is this true as regards the alteration of facial lines and changes in expression. Naturally this obstruction to the entrance of air by the normal route, viz., through the nose, necessitates its seeking some other mode of ingress to reach the lungs; the only other way is through the mouth, and hence we have the condition of mouth-breathing with all the discomfort and unpleasant effects which such a condition entails. Long-continued mouth-breathing brings into play muscles about this orifice not usually called upon for excessive work, and at the same time nominally puts at rest muscles about the nose whose functions are not called into play; the result is an alteration of facial expression to such a degree in well-marked cases as to give to the child a stupid, almost idiotic appearance. The obstruction in the case of the pharyngeal tonsil may become so excessive as to encroach on the pharyngeal orifice of the Eustachian tube, interfering with the proper supply of air to the tympanic cavity, thus inducing catarrhal or inflammatory conditions of the mucous lining of this tube and also of the tympanic chamber. The result of this is dullness of hearing or even complete deafness.

The normal course of the secretion from the numerous mucous glands in the nasal chambers is obstructed and hence flows back into the naso-pharynx; added to this we have a greatly increased secretion from the adenoid vegetations at the vault. During sleep this mucous collects in the pharynx, and as the child is obliged to breathe through the mouth, we have associated loud snoring with rattling and gurgling of air through the mucous secretion; hence the sleep of the child is restless and fitful and the annoyance to other members of the household excessive.

We have then as the salient features of a case we are attempting to portray: mouth-breathing, snoring, rattling of mucous in the fauces, and disturbed sleep; a dull, listless expression of countenance; hardness of hearing, and in many cases impairment of general health, causing the child to be anæmic, sunken-chested, prone to catarrhal attacks, and of stunted growth.

Much has been written and various are the opinions as to the treatment of these distressing conditions. We are not concerned in this article whether it is the proper method to remove adenoid growths by forceps, curette, or finger; to diminish hypertrophied turbinates by means of galvano-cautery snare or escharotics, but a few words in conclusion as to the management of cases in their incipiency may not be amiss.

Mothers should be urged not to neglect a persistent snuffle in her child, to regard as trivial the continuance of a mucous discharge after diphtheria or the exanthemata. Physicians, on the other hand, should not pass these complaints lightly by ignoring them or directing in an indifferent manner some simple and likely inefficient remedy.

The management of hypertrophies at this early stage is as simple as the results are happy. After a careful examination the nares and upper pharynx should be cleansed of mucous by an antiseptic and detergent spray, *e. g.*, Dobell's solution,

Seiler's tablet, Listerine in diluted solution, etc., and then applications made to the affected mucous membrane of an astringent or alterant, depending on the condition of the parts. Should we find simply an increased secretion with no appreciable alteration in the turbinates, tonsils, and surrounding tissues, it is likely we will accomplish all that could be desired by directing spraying of the nares thoroughly by one or other of the solutions mentioned faithfully until the membrane presents a normal appearance and the secretion ceases.

In cases still farther advanced in which we find the turbinates quite red and somewhat swollen; the pharyngeal tonsil secreting more mucus than normal, and rather large; the faucial tonsil red and somewhat hypertrophied, we will find it advantageous to use some application to diminish the inflammatory condition. These applications maybe made quite painless by spraying the parts with a 5 per cent. solution of cocaine or introducing a cotton tampon saturated in the same solution. In the nares a solution which has gained favor in the various clinics devoted to these diseases is that of iodine. The strength of the solution may be graded by the severity or obstinacy of the case. It is well to begin with a weak solution, increasing the strength as the necessities of the case demand. In some cases which resist this plan of treatment a touch of the fused bead of chromic acid along the turbinates will often accomplish the desired object; this latter plan should be immediately followed by the antiseptic spray to dilute and limit the destructive power of the escharotic. It is merely necessary in these early cases to touch the mucous membrane lightly to produce a superficial eschar; the resulting slough and subsequent contraction will so squeeze the blood-vessels as to bring about the desired diminution in the size of the tissues.

The pharyngeal tonsil also in many cases respond satisfactorily to application of iodine on a pledget of cotton carried by an applicator so curved as to pass readily behind the soft palate and up to the vault. Glycerole of tannin has been found to act very happily, though perhaps a little more unpleasant in its effects. The application of chromic acid (fused) to a pharyngeal tonsil should not be advised, though undoubtedly as useful as in the nose, unless the operator is steady and familiar with making applications by the aid of the rhinoscopic mirror.

It would be hardly necessary to refer to the treatment of catarrhal and slight hypertrophic conditions of the faucial tonsils the result of the causes named, were it not that here, in spite of the ready accessibility of the part, they are subject to neglect. The same process of cleansing is as necessary as in the other hypertrophies, after which an application of a solution of 60 gr. to the drachm of nitrate of silver, glycerole of tannin, or in stubborn cases producing a superficial slough by fused chromic acid, will probably answer every purpose.

In the more advanced cases or in those which fail to respond to the above-outlined plan of treatment and a steady increase of the hypertrophied tissues occurs, there is but one plan which should be carried out at as early a date as possible, namely, a destruction of the hypertrophied tissue. The various plans to accomplish this object will not be touched upon, but can be readily learned by consulting any of the modern treatises devoted to the treatment of diseases of the nose and throat.

In recapitulation the object of this paper has been to call attention to the following points:

1. The importance and desirability of early attention to diseases of the upper respiratory tract consisting of the nose and nasopharynx.

2. The production of alteration in nutrition and possibly pulmonary and bronchial troubles by hypertrophic conditions of the upper respiratory tract.

3. The etiology of these states referring to the influence of environment and especial mention of diphtheria and the exanthemata as prominent factors in this category.

4. The prevalence of these conditions.

5. Carelessness and indifference in both physician and patient as to the various catarrhal states which are believed to be the precursors of the diseases under consideration.

6. The necessity of early treatment and the power for good exercised by the family physician in these troublesome conditions.

7. The clinical picture presented by these unfortunates, laying especial stress on the alteration in facial expression and the distressing and annoying condition of the child during sleep.

A CASE OF SPONTANEOUS ABSORPTION OF A CATARACTOUS LENS.*

T. B. SCHNEIDEMAN, M. D.†

A. B., aged 65 years, male; vision of the left eye began to grow dim twenty years ago. The dimness increased until he became entirely blind in that eye, two years after the trouble began. Has never had pain, injury, nor inflammation in the eye. At Wills Eye Hospital, which institution he visited at that time, one of the surgeons informed him that he had a cataract and advised operation for its removal, but the patient did not consent on account of the excellent vision which he enjoyed with the other eye.

The blind eye remained in the same condition, so far as the patient knows, until 5 years ago, when he observed a slight improvement. The sight continued to improve slowly, so that he was again able to distinguish large objects, the entire course being unattended with any pain.

Present condition. Eye of normal appearance externally; pupil round and reacts to light and convergence. Iris markedly tremulous with the movements of the eyeball. Fundus reflex of normal intensity throughout region of the pupil, except at the upper part where it is concealed by a dense gray membranous opacity. Closer examination shows that this membrane is freely movable, the lower extremity floating behind the iris, the upper portion being attached above. The membrane is evidently the remains of the capsule of the lens. There were a few small opacities in the vitreous, the rapidity of their movements proving that structure to have become fluid. The fundus was distinctly visible in all its details, and could be seen with a convex lens (+ 11). The nerve is decidedly pale and presents a shallow cup; the vessels are narrow and fewer than in health. The nerve is evidently atrophic. With + 11 the vision equals 12|200. The organ in its present condition presents exactly the appearance of an eye operated upon successfully by discission.

The best attainable vision with the correcting lens is low, but this is due to disease (atrophy) of the optic nerve and not to opacity of the media. Low as is the vision, if the case had been operated upon the result would still have been counted a success.

The interest in this case attaches chiefly to two points: 1. Complete absorption of the lens, together with its nucleus, occurring in a subject of the age of this patient; and 2. That this process should have gone on to completion without the supervention of glaucoma. Dislocation of an opaque lens is met with not infrequently, but the organ is found unaltered, at least as to the nucleus, years after the luxation has occurred, its presence in the anterior chamber causing repeated and destructive attacks of inflammation from the increase of tension to which it gives rise.

Absorption is, of course, the rule in the youthful eye when the fluid of the anterior chamber is permitted to gain access to the substance of the lens proper—a fact which is taken advantage of in the operation of discission. The infrequency of this occurrence in the adult eye is shown by the unsuccessful attempts of Beer to apply the same procedure to such eyes before the indications for the operation had been established; of twenty-nine eyes subjected to the operation, success was attained in only a single case.

The possibility of rupture of the zonula is greater where the lens has become opaque, because this structure participates in the degenerative changes which the whole lens system undergoes; and the more advanced these changes the greater likelihood of such an occurrence, as in hypermature cataract with considerable shrinking and atrophy of the organ. Such shrinking of itself exerts traction upon the suspensory ligament, and such traction may well be partial and affect one portion of the circumference more than the rest, and which yields at that point; in the case reported this point was situated at the inferior attachment.

The fluid condition of the vitreous noted was probably an important factor in bringing about the result; this condition may very likely have existed prior to the lesion of the suspensory ligament, the lens having lost some of the support pos-

*Read before Philadelphia County Medical Society, March 14, 1894.

†Adjunct Professor of Diseases of the Eye, Philadelphia Polyclinic; Assistant surgeon to Wills Eye Hospital; Oculist to St. Christopher's Hospital Dispensary.

teriorly and normally furnished by the contents of the vitreous chamber in consequence of the alteration in that structure.

The text-books refer to dislocation of the lens as a late event in the history of cataract. Thus Fuchs observes: "The shrinking of the hypermature cataract affects not only its thickness, but also its equatorial diameter. In proportion as the latter diminishes in size, the zonula of Zinn is stretched, and thereupon undergoes a corresponding atrophy of its fibres. Consequently, the attachment of the lens becomes imperfect. Spontaneous luxation even of the lens may take place through partial or total rupture of the zonula. . . ." Again, after remarking "that spontaneous restoration of sight is extremely rare in senile cataract with a a hard nucleus," he admits the possibility of such occurrence in three ways: By the resorption in the exceptional cases not only of the cortex, but also of the nucleus to such an extent that nothing but slight opacities remain. The other possibilities to which he refers are the formation of a Morgagnian cataract and spontaneous dislocation of the lens, but without absorption.

Soelberg Wells speaks of dislocation due to gradual relaxation or elongation of suspensory ligament, or its partial rupture. In such a condition, he adds, a very slight shock to the eye, which may have been unnoticed by the patient, will produce dislocation of the lens.

Berry (*Diseases of the Eye*, p. 100) speaks as follows: "After the condition of maturity has existed for a longer or for a shorter time, further changes may take place, which are characterized as stages of hypermaturity. The opaque cortical substance may to some extent shrivel from loss of fluid, and in this way a little of the sight—as a rule, only a very little—be regained."

The gradual improvement in the vision raises the question whether the lens was actually dislocated or whether the rupture extended into the anterior capsule, giving access to the aqueous humor, causing gradual absorption of that organ as in the operative procedure of discission, or whether the improvement can be explained by the solution of the opaque lens after dislocation into the anterior chamber. The latter is the position usually occupied by the lens after luxation.

Perhaps the gradual improvement observed by the patient depended upon a partial displacement of the opacity. This cannot be determined with certainty; the patient did not come under observation until the process, whatever its exact nature may have been, had gone on to completion. In any event complete absorption of the lens in the adult is a rare termination of cataract.

A REPORT OF EIGHT CRANIOTOMIES; WITH REMARKS ON THE TREATMENT OF LABOR IN CONTRACTED PELVES.*

DANIEL LONGAKER, M. D.

When labor is rendered pathological by the existence of contraction of the pelvis, certain deviations from the normal occur which it may be well for us to glance at here. These have reference to the fœtus and to the process of dilatation. Normally the head rests in the pelvis before a single pain occurs, even in a multiparous patient and in a primiparous weeks before the advent of labor partial descent and partial flexion will have taken place. In the latter the absence of this adaptation on the approach of labor is significant of disproportion between the presenting part of the child and the pelvis, and either the head is not in relation with the pelvic inlet or it is too large.

So long as engagement has not taken place even the experienced may be in doubt of the nature of the presenting part on mere digital examination. Too much emphasis cannot be placed upon this one point. A pelvis relatively empty and the presenting part reached with difficulty by the examining finger means, very frequently, the existence of narrowing. This is true even if found very early in labor and in a primipara before labor. All such cases demand the fullest investigation. If the attendant is not competent to make a careful estimate of the degree of pelvic narrowing, and finds this suspicious sign of its existence, he should request expert aid without delay. It will not do to leave such a case to chance. It is inexcusable to conclude, that since the pains are in-

* Read before the Philadelphia County Medical Society, March, 17, 1894.

frequent and the os is undilated nothing can be done, and therefore the doctor may go home to finish his peaceful slumbers or to attend to his usual routine of calls.

The dilatation of the os is slow and the pains are irregular. A bag of amniotic fluid may be forced down, distending even the perineum, but when it has ruptured dilatation will be found incomplete. The os is undilated and remains *undilated*. As a rule, however, it does not long remain undilatable. All that is required to secure dilation is advancement of the presenting part.

The general management of this class of pathological labor may next be considered. Unless clear ideas upon the subject of treatment are generally diffussed, it will certainly be a long time before craniotomy becomes an obsolete operation. Time was, when it was more frequently done than the forceps operation. The time will come when even its present relative infrequency will no longer be known, and to aid in bringing this about is the chief object of the present contribution.

If the obstetrician has not informed himself fully of the relation of the child to the pelvis and of the conformation of the latter before the advent of labor, no time should be lost in doing so as soon as he sees the case. External examination, either alone or combined with internal, will disclose the exact relation of the fœtus to the parturient canal. The rectum and bladder must be empty. Much can be learned by external examination of the size of the fœtus and of the extent of the disproportion between the head and the pelvis. Ether should be given if necessary. Relaxation of the abdominal parietes is thus secured. The hand may also be passed into the vagina, although I have not often found this requisitie. The position, rate, and intensity of the fœtal heart-sounds should be noted early. Pelvimetry will afford valuable data, and it should never be omitted. I refer to instrumental and external measurements, having no experience with the recent instruments for taking the internal diameters. It must be admitted that there is a need for such, and I believe the instruments of Skutch, Hirst, and others will fill a real want.

I know of no method to differentiate between a generally contracted pelvis and a flat one other than this, and a knowledge of this fact is of the greatest practical importance. Thus a conjugate of three and a half inches, with ample transverse diameters, is a trifling affair alongside of the same conjugate with a proportionate shortening of the transverse diameters. In the latter the mechanism of labor is totally different, the treatment may differ and the prognosis is much graver. But, fortunately, the flat pelvis is the type we usually meet with. In this list it existed in all save one, or, at most, two cases. In estimating the conjugate I have limited myself to the digital method. One or two fingers are introduced into the vagina, at the same time depressing the perineum; the finger or fingers are directed upward until the round sacral promontory is reached. The other hand separates the labiæ, and with the index finger the point of the subpubic ligament is marked. The distance from this point to the tip of the finger resting upon the sacro-lumbar articulation is the diagonal conjugate. I believe a deduction of three quarters of an inch from this will give an approximate measurement of the true conjugate in most cases. I am convinced the true measurement will be underestimated more frequently than overestimated by this plan. In a true conjugate under three and a quarter inches no difficulty will be experienced in reaching the promontory with the index alone.

As to the difference in mechanism. In the generally contracted pelvis the head enters, if at all, in a state of extreme flexion. In the flat, between flexion and extension, both anterior and posterior fontanelle on about the same plane. The bi-parietal diameter adjusts itself to the so-called lateral conjugate—the line from the symphysis to the hollow of the sacral wing—and the bi-temporal diameter is in relation with the true antero-posterior diameter of the pelvis. Thus the jutting promontory of the sacrum may be passed by a head of moderate size, since the bi-temporal diameter is rarely much above three inches, and half an inch less than the bi-parietal. In addition, the head tends to enter the pelvis and pass the obstruction in a position of the lateral obliquity, the sagittal suture nearer to the promontory than to the symphysis. This peculiar mechanism is sometimes spoken of as the cause of dystocia. I have even known of attempts to force the lateral occiput to the front under this mistaken impression. It is needless to say this should not be done. The membranes

should be carefully protected; early rupture is to be avoided. If anterior obliquity of the uterus exists the patient should be placed on her back and a bandage should be firmly and evenly applied. Nothing answers better than a stout piece of muslin wide enough to extend from below the trochanters up to a level with or a little above the fundus uteri. This the obstetrician himself secures firmly by means of large safety-pins. When properly and early done, I am sure many a case of malpresentation and serious dystocia may be prevented.

The risk of infection should not be increased by repeated digital examination. After the peculiar features of the case have been learned, they are unnecessary, can do no good, and may do harm. A period of judicious expectancy is quite proper, and if the contraction is not too great and the fœtal head of average size or under, the maternal efforts may overcome the disproportion. I have seen this more than once where the conjugate has been under three and a half inches. During this time all possible means are employed to preserve the patient's strength. Easily assimilable food is to be taken, and a moderate dose of opium is often of advantage. During the expulsive stage, quinine sulphate in a single fifteen-grain dose, strong coffee, and, occasionally, alcohilic stimulants are appropriate. Encouragement and sympathy are to be extended to the patient. From time to time the fœtal heart sounds are noted. As soon as it is evident that the woman's unaided efforts are insufficient and before the child's life is endangered, delivery must be assisted. I am convinced that the use of the forceps, and especially of the axis-traction forceps, is proper. Applied at the right time and in a proper way an average-size head may be delivered when the conjugate is three and a quarter inches. In a paper published in the *American Journal of Obstetrics*, May, 1877, I report several successful cases where the contraction was even greater. I would prefer the forceps to version because failure to deliver does not involve sacrifice of the child's life. If any doubt exists of the possibility of speedily extracting the after-coming head, version should not be done. To resort to version after the forceps have failed seems illogical since there must be greater uncertainity of being able to deliver the after-coming head quickly after a decided disproportion has been thus demonstrated. Beside this there is considerable danger of rupture of the uterus when the operation is undertaken after the waters have been drained away and when it is contracted on the fœtus. To make version and then allow the child to die in order that we may not be compelled to perforate a living child's head seems to me equally wrong. Nor do I believe that craniotomy is rendered easier when the head is last. My own views is that with forceps at the proper time, just as great a degree of disproportion, if not greater, may be overcome and with less risk to either mother or child than with version. I would not choose the latter operation unless I was sure the head could be quickly extracted.

None of the details of an aseptic major surgical operation should be omitted. As such, the application of the forceps at the superior strait is to be regarded. Undue force is not to be used. It will render the result, so far as the child is concerned, as bad as craniotomy, and for the mother worse.

I think it no exaggeration to say in advance that the management of the following case offers a marked contrast to the plan just sketched. And yet the case is but a counterpart of all the rest, with little variation in unimportant details. Its history is given without further comment.

Case VII.—In the latter part of April, 1893, I was asked to see Mrs. S., a native of Poland, who was then living at the rear end of a court not far from my residence. In this, her fourth labor, she had first the services of a midwife, who concluded after very active labor had existed over three hours, that a physician ought to be summoned. She told me she had only given ʒj of the fluid extract of ergot, and that in spite of very severe expulsive pains no advance whatever had been made in the position of the head. The doctor, a regular practitioner and a man of some obstetric experience, attempted to apply the forceps but failed, and at the end of an hour decided to call on a friend and neighbor, also a well-qualified practitioner—one who had served a term as interne in one of our largest hospitals. Together they succeeded in getting the instrument on the head, but ordinary traction efforts failed to advance it. Finally, bracing the feet against the edge of the bed, the forceps

slipped and the operator landed against the wall. At 12, midnight, it was concluded that forceps could not deliver the child. This was *eleven* hours after the membranes had ruptured, and during all this time the woman had been in very active labor, which had been in progress about twenty-four hours. However, podalic version was made, but now the real difficulty seemed to begin, and all the power two strong men could bring to bear on the delivered body failed to extract the head. Efforts at extraction were continued until the vertebral column parted and the body was torn from the head. At this juncture it was decided that the head could not be delivered unless it was first crushed, and this I was asked to do by the physician first summoned. Arriving at the house I found doctor number two had abandoned the case, the midwife alone in attendance. The remarkable advice had been given to summon an ambulance and send the woman to the Philadelphia Hospital, three miles away. The woman was then having short, rapidly succeeding pains, the uterus in tetanic contraction. Her appearance was extremely anxious, pulse frequent, and temperature above normal. The body of a very large male child lay on the bed between the thighs. The vulva was œdematous, the labiæ minora being swollen to the size of one's flattened hand. There was an offensive odor of decomposition. The head was in the uterus above the plane of the pelvic inlet and attached to the body by integument only.

After irrigating external genitalia and vagina, a catheter, introduced into the bladder with great difficulty, withdrew a few ounces of urine. The entire vagina was greatly swollen, and that there was no sloughing afterward was a matter of surprise to me. The left hand introduced into the uterus found the face looking to the right, an ear just above and behind the symphysis. The midwife held the child's body up out of the way, the physician in attendance steadied the head through the abdominal wall, and thus perforation by means of the Blot perforator was quickly made. This is a straight instrument. The brain was broken up thoroughly by passing the point of the instrument all around in the cranial cavity. Without flushing this, the Braun craniocast was quickly adjusted, the head collapsed, the opening being near the base of the cranium, and the entire operation was concluded in less than ten minutes. As the head escaped its resiliency caused air to be sucked into the perforation, and the sound emitted was something similar to that observed during the first inspiratory effort of a half drowned baby. Mistaking it for this, one of the assistants exclaimed, "And can it be possible!"

The placenta was quickly expressed, the uterus irrigated with a large amount of hot water, then with a 1:2000 bichloride of mercury solution followed by more hot water. Tha child was a male and weighed over nine pounds minus blood and brains. The diagonal conjugate, measured after delivery was exactly four inches. A liberal estimate would give three and a quarter inches for the true, the conjugata vera (8. 2 cm.). The brief details of this woman's parturient history which I learned after the delivery was completed may not be uninteresting.

Her first labor was long and difficult, and the babe, though small, was born dead. I could not find out whether instrumentally or not.

In her second pregnancy premature labor occurred at the end of the seventh month as the result of a fall, and twins were born, the first one living a few days, and the second seven months.

In the third labor the babe also perished; she was septically infected and sick in bed two months.

At 10 A. M., on the day following labor there was a normal temperature, and pulse 96. In about two weeks she was up and about, and I believe made a perfect recovery.

I have given the history of the cause in full because it is fairly representative save in a few unimportant particulars. For this reason a more detailed account of the other cases is omitted.

All were seen in consultation, the writer being called after labor had existed many hours, and, as a rule, when one plan of treatment after another had failed to effect delivery. Various oxytocics, including ergot, had been given; forceps of various designs had been applied, and failing, version had been attempted, with what success is seen in the case just detailed. It is needless to say the child's life had ceased in nearly every case. In spite even of a parturient history, that would of itself be suggestive of pelvic deformity, this was rarely suspected. Nor did the peculiar

mechanism and course of the labor at once impress themselves upon the minds of the attendants.

The contraction in none of the cases save the first was very great. The labors were insuperably obstructed by the large size of the children.

In Cases IV., V., and VIII. the greatest difficulty was met with in the extraction of the body, and this was accomplished finally by perforating the thorax, applying the cranioclast, and completing the delivery by traction on this. I am sure it would otherwise have been impossible.

And yet Case IV. has given birth to a living child since the craniotomy, without any special difficulty.

A word in ragard to Cases I. and V. The first should never have been delivered by craniotomy. An early Cæsarean section would have saved the child and given the mother a chance. When the conjugate approximates two and a half inches (0.063 m.) the difficulty to be anticipated in exacting an eight-pound child is not small. The fact that conjugate narrowing to this degree is, as a rule, associated with transverse shortening is not to be forgotten.

This was the only fatal case.

Case V., seen with Drs. De Young and Leopold, is in some respects the most unique of the entire group. Lying across the bed she was truly a mountain of flesh; her weight must have been between three and four hundred pounds. The mere making of a digital examination was exhausting. The skin covering the abdominal parietes was as hard as parchment. Subcutaneous tissues and muscles were waterlogged and infiltrated with fat. It was one of the rare instances in which abdominal palpatation would be impracticable. The amniotic fluid was in excess. There was early prolapse of the cord. The attendants had utterly exhausted themselves in their efforts to advance the head, and failing, had attempted version. Although the head was still very high and hard to reach from below, no special difficulty was experienced in perforation. The extraction was difficult, however, because of the enormous size of the child. I regret that it was not weighed. The woman made a rapid recovery. Attempts to learn

In conclusion, I want to emphasize the following points:

Insuperable obstruction of labor because of pelvic contraction is a frequent condition.

Arrest of the head at or above the pelvic brim is domparatively easy of recognition by attention to the details of external palpation, by the combined method and by the course of the labor.

Disproportion between the head and pelvis ought always to be recognlzed early in order that correct principles of treatment may be adopted.

Forceps may be employed when, after a period of judicious waiting, it is evident that the natural powers unaided are incapable of driving the head beyond the obstruction. Their use must be attended with all the care usually observed in the execution of a major surgical operation. If the disproportion is evidently very marked, leading to doubt of their successful use, an alternative should be decided on at the outset in the event of their failure. This will obviate the needless loss of valuable time.

Podalic version may be made where the membranes have not been long ruptured, and when the operator is reasonably sure of encountering no great difficulty in the extraction of the after coming head. It is of doubtful expediency after the forceps have been applied unsuccessfully.

An experience of two symphysiotomies goes far toward convincing me that this operation is destined to take high rank in the list of life-saving obstetric procedures; that it is *the alternative* when, in a contracted pelvis of moderate degree (not under 6.7 c. m.), the obstruction cannot be overcome by other means, and that it will go a long way in the direction of rendering the horrible operation of craniotomy obsolete and the Cæsaraen section under the relative indication unnecessary.

I finally want to express my belief that in assuming the management of a case of labor we, as physicians, at tha same time assume the solemn and sacred obligation of saving two lives; we dare not neglect or refuse to do anything which will conduce to this end. The social condition, whim, or desire of patients must not be allowed to swerve us from this conclusion—that the mother and her unborn child have equal claims upon us. Moreover, what is in the interest of the one is usually in the interest of the other. In our determination not to destroy the living, though unborn child, we are supported alike by the dogmatic teaching of the Church, by sound ethies, and by the latest science.

No.	Date	Age	Pregnancy	Nationality	Pelvis	Presentation	Duration of labor	Delivery attempted by	Sex	Weight of child	Result	Remarks
1	Jan. 21, 1882	39	First	Germany	Conjugata vera estimated 2½-2¾ in.	Cephalic prolapse of cord	36 hours; waters had drained 18 hours	Forceps	M	8 lbs.	Death on 8th day	
2	Nov. 25, 1885	29	Fourth	Ireland	Conjugata vera estimated 3½ in. S. bat	Brow	24 hours; membranes ruptured in 18 hours	Three pairs forceps; cephalic version	M	10 lbs. (minus brain)	Gradual and slow recovery	See American Journal of Obstetrics, vol. xx, p. 469
3	May 30, 1888	18	First	United States	Conjugata vera estimated 3½ in. Justo minor	Vertex, R. O. I. *a.*	24 hours; membranes ruptured in 7 hours	Wallace, Simpson, and axis-traction forceps	F	7 lbs.	Out of bed on 12th day	
4	Nov. 5, 1891	22	Second	Austria	Conjugata vera estimated 3½ in. Justo minor	Vertex, R. O. I.	48 hours; membranes had ruptured early	Hodge and Simpson forceps	..	7 lbs.	Perfect recovery	Has born a small child sice; no difficulty
5	Feb. 19, 1892	38	Seventh	Russia	Normal; woman anasarcous	Prolapse of cord	36 hours; membranes ruptured over 24 hours	Forceps, then version	M	Huge	Perfect recovery	This woman was of enormous size, and there was no descent of the head whatever; hydramnion also present
6	March 27, 1892	22	First	Russia	Conjugata vera estimated 3½ in. S. flat	Vertex, L. O. I.	18 hours; membranes ruptured in 6 hours	Forceps and perforation	M	Large	Perfect and rapid recovery	Has since born a living child; no difficulty
7	April 29, 1893	28	Fourth	Poland	Conjugata vera estimated 3¼ in. S. flat	Face	24 hours; membranes ruptured over 12 hours	Forceps, then version	M	9 lbs.	Recovery	Head had been torn off when I first saw the case
8	June 26, 1893	28	First	United States	Conjugata vera estimated 3¾ in. S. flat	Vertex, R. O. I. *a.*	40 hours; membranes ruptured in 6 hours	Forceps repeatedly slipped off; A. T. failed	M	9 lbs.	Recovery	

TRANSLATIONS.

A PRIMARY SARCOMA OF THE STOMACH.

The rare occurrence of this disease has induced the author, H. Westphalen, to give an accurate account of the case, together with the results from an autopsy and the microscopical examination of the specimens.

The patient, male, aged 30, was sick one year. The symptoms were principally intense pains in the epigastrium, which were independent of digestion or ingestion of food. Occasionally vomiting occurred, principally before breakfast, and consisted of mucous and acid secretions. At times there were some eructations of gas unconnected with any taste or odor. The increased salivation was an early symptom, which disappeared with time. The patient was able to feel a swelling in the epigastrium, which grew larger. Palpation in the left half of the epigastrium revealed an irregular, ill-defined swelling, movable on deep respiration. Its location was four fingers above the umbilicus, passing upwards under the left ribs, and was lost in the hepatic dullness on percussion. The resistance can be felt in the median line; the stomach is found 1½ fingers above the umbilicus; there is no dilatation present; acid reaction is not present. It was impossible at that time to decide, with certainty, to which organ this belonged. The patient was admitted on 7th of Feb. and the diagnosis remained uncertain until the 4th of March. During the four weeks there had been rapid emaciation. The author induced the patient to drink a glass of ice water and then examined the contents of the stomach one hour later. It was neutral in reaction and contained a small piece of tissue, which under the microscope was found to consist of small round neucleated cells which were partially arranged in a symmetrical manner, lying close to one another and were apparently held together by connective tissue. Glandular tissue could not be found.

On March 14th, laparotomy was performed. It was found that the greater portion of the stomach was involved in the growth and it was impossible to remove it. The patient died on March 17th.

The autopsy revealed the following: Diffuse glandular enlargement in the omentum. The stomach normal in size, its posterior portion thoroughly united to the liver and spleen. The walls of the stomach were almost universally thickened; its muscular structure almost entirely displaced by brainlike, or gelatinous substance. Numerous nodes on its inner surface seemed about to break down; one of these extending deep through the tissues to the serosa.

Microscopical examinations of these nodes uniformly show them to belong to the round-celled myxo-sarcoma.—(*Centralb. fur Chirurgie*, No. 10, 1894.)

SIMPLE INTEREST RULES.—Four-per-cent.—Multiply the principal by the number of days to run, separate the right-hand figure from the product, and divide by 9.

Five per cent.—Multiply by number of days and divide by 72.

Six per cent.—Multiply by number of days, separate right-hand figure and divide by 6.

Seven and three-tenths per cent.—Multiply by number of days, and double the amount so obtained. On $100 the interest is just two cents per day.

Eight per cent.—Multiply by number of days and divide by 45.

Nine per cent.—Multiply by number of days, separate right-hand figure, and divide by 4.

Ten per cent.—Multiply by number of days and divide by 36.

Twelve per cent.—Multiply by number of days, separate right-hand figure, and divide by 3.

AUCTIONEER.—This book, gentlemen, is especially valuable, as it contains marginal notes in the handwriting of Alexander Von Humboldt. A hundred marks offered. Going—going—gone. It is yours sir. (The autograph marginal note by the renowned scholar was as follows: "This book is not worth the paper it is printed on.)"—*Humor-Bacillen.*

THE MEDICAL AND SURGICAL REPORTER

ISSUED EVERY SATURDAY

Address care P. O. Box 843, Philadelphia, Pa:

HAROLD H. KYNETT, A. M., M. D.
Editor

RODERIC C. PENFIELD
Publisher

147-149-151 North Tenth Street, Philadelphia

TERMS:—Three Dollars a year, strictly in advance. Sent four months on trial for $1.00.

REMITTANCES should be made payable only to the Publisher, and should be made by Postal Note, Money Order or Registered Letter.

NOTICE TO CONTRIBUTORS:—We are always glad to receive articles of value to the profession, and when used they will be paid for, or reprints supplied, as the author may elect. Where reprints are desired, writers are requested to make a note of that fact on the first page of the MS. It is well for contributors to enclose stamps for postage, that the articles may be returned if not found available.

SATURDAY, APRIL 14, 1894.

EDITORIAL.

"NO MATTER:" "NEVER MIND."

The intelligent public of this country have of late years noticed, with more or less indifference, the determined efforts of the medical profession to raise the requirements for entering that fellowship to a degree which will effectually prohibit unfit individuals assuming the important responsibilities devolving upon medical practitioners.

The differences of doctors; the bigotry of sectarians; the existence of some code of ethics peculiar to medical men, and of which the laity has no knowledge—'tis true, 'tis pity, and pity 'tis 'tis true, for it is essentially the golden rule, the demonstrations of spectre analyses and the squaring of the circle by medical experts; the colossal fortunes wrung from suffering humanity; the pharisee and the quack—all these and many other phases of medical life were quips mouldy with age when Father Time first heard them in his infancy. Handed down from sire to son, these shadows of jocose shades no longer provoke merriment, and even the most violent convulsions of the funny cartoonist can produce merely a wan smile of pity to find him "reduced to that."

But the public at large as well as scientific men are now invited to witness burlesques of such absolute absurdity and grotesque incongruity that all must perforce smile.

These farces are given under the auspices and personal supervision of the state legislatures of New York and Massachusetts.

Both exhibitions are for the benefit of persons in need of mind cure and seeking a place to apply a remedy. Mind curers, faith healers, *et id genus omne*, under the generic term of Christian Scientists—in every variety and species of this genus christianity and science are the distinguishing characteristics most constantly absent—appear as unfortunates who are clamoring for relief from oppression.

In the New York show, christian scientists appear praying that the existing laws be modified, so that "any person may

freely contract for the services of whomsoever he considers competent to alleviate suffering or prevent or heal disease, and that it shall be lawful for persons so employed to attend, treat, nurse, and endeavor to heal the employing patient, *and receive compensation therefor*, subject to the laws of the State relative to malpractice."

The humor of the situation is enhanced when we see the efforts of apostles of the immaterial to enlighten politicians who regard nothing but what can be made evident to the sense of touch. The latter expectantly listen to the demonstrations of the supremacy of mind over matter; they may conceive of the existence of mind, but evidently are skeptical as to the non-existence of matter or the discussion would abruptly close. They ask the scientist, "What is mind?" and are satisfied with the reply "No matter." Then they ask, "What is matter?" and receive the evasive reply, "Never mind." The philosophy is complete. The herald of the mind triumphant and the practical believer in the substance of things hoped for, have met on a plane common to both, which the prayer of the one and the practice of the other discloses to be—"Never mind." The hilarity of the occasion is sustained throughout by the antics of a prominent ex-member of the judicial bench that, who reaches the logical conclusion in any event, these scientists can do no harm.

The exhibition in the old "Bay State" is more elaborate and refined. When the glories of ancient Athens departed forever, the Genius of the Agora was forced to seek a living elsewhere, and for centuries tramped aimlessly up and down and to and fro upon the earth, until, yielding to the attraction of the magnetic bean-pole, it took up its permanent residence in the hub of the intellectual universe. And to-day the modern Athenians, as did the Attic gossips, "spend their time in nothing else but either to tell or to hear some new thing." In this congenial atmosphere, christian science, with the dignity acquired in the locality, solemnly protests against a bill now pending in the State Legislature. The bill provides for a Board of five examiners, appointed by the Goveanor, which shall issue a license to practice medicine in Massachusetts to all persons "without reputable degrees," on condition that they pass an examination satisfactory to the Board.

Here the interest is centered upon the star comedian. This artist has won laurels in sciences other than christian, but his present role is so unique as to secure the attention of an observer of "this busy world," (*Harper's Weekly*) who say, anent the subject:—

"Among the strongest documents on their (mind-curers) side is a long letter from Dr. William James, the Harvard professor of psychology, who says a number of things that will make lively reading for his colleagues of the medical profession. His objections to the bill are that it is too grandmotherly, and opposed to the best traditions of the State, that 'it adds but an infinitesimal degree of security to the citizens' chances of being faultlessly treated when sick' and that 'it tends to obstruct the progress of therapeutic knowledge.' His argument on his first point is that the proposed bill interferes with personal liberty. . On his second point that the best doctors make mistakes, that very many doctors with medical degrees are unfit to practise, and that it is absurd to try to be so particular about doctors anyway, so long as the citizen can buy patent medicines and consume them 'at his unchartered will.' His discourse on his third point takes him into a field in which he is an expert, and is very interesting. He finds that in the treatment of diseases of the nervous system and the mind, power and learning do not necessarily go together. Remarking that the 'great Charcot is accused, and probably, correctly

of actually manufacturing new types of invalidism by his scientific performances at the Salpètrière, while some common doctor will rescue case after case by using methods which are not medical, but pedagogic and moral,' he goes on to say:

'Of all the new agencies that our day has seen, there is but one that tends steadily to assume a more and more commanding importance, and that is the agency of the patient's mind itself. Whoever can produce effects there holds the key of the situation in a number of morbid conditions of which we do not yet know the extent, for systematic experiments in this direction are in their merest infancy. They began in Europe fifteen years ago, when the medical world so tardily admitted the facts of hypnotism to be true, and in this country they have been carried on in a much bolder and more radical fashion by all those 'mind-curers' and 'christian scientists' with whose results the public, and even the profession, are growing gradually familiar.

'I assuredly hold no brief for any of these healers, and must confess that my intellect has been unable to assimilate their theories, so far as I have heard them given. But their *facts* are patent and startling; and anything that interferes with the multiplication of these facts, and with our freest opportunity of observing and studying them, will, I believe, be a public calamity. The law now proposed will so interfere, simply because the mind-curers will not take the examinations. They return to science disdain for disdain; and nothing would please some of them better than such a taste of imprisonment as might, by the public outcry it would occasion, bring the law rattling down about the ears of the mandarins who should have enacted it.

'And whatever one may think of the narrowness of the mind-curers, their logical position is impregnable. They are proving by the most brilliant new results that the therapeutic relation may be what we can at present describe only as a relation of one person to another person; and they are consistent in resisting to the uttermost any legislation that would make 'examinable' information the root of medical virtue, and hamper the free play of personal force and affinity by mechanically imposed conditions."

An intellect unable to assimilate the theories of mind-curers and yet conclude that their logical position is impregnable may present hyperbole upon hyperbole of psychological excellence, but it lacks common sense. Cases of such metaphysical strabismus are rarely met with in the medical profession of Massachusetts.

To these phantasmagoria a most refreshing contrast is found in the current number of the *Forum*, in which appears a review of medical progress in America by a writer whose brilliancy is not that of insanity and whose opportunity for accurate information as to the status of medical science in this country, both past and present, is equal'ed by few and excelled by none. A condensed abstract of Doctor George F. Shrady's account of "American Achievements in Surgery" will be found in another column.

Death of Dr. John H. Rauch.

John H. Rauch, born September 4, 1828, in Lebanon, Pa., died March 24, 1894, at the home of his brother in the city of his nativity.

He took his doctorate in medicine at the University of Pennsylvania in 1849. In 1850 he settled in Burlington, Iowa. In 1857 he was appointed to the chair of Materia Medica in Rush Medical College, Chicago, which position he filled for three years. He was one of the organizers of the Chicago College of Pharmacy in 1859, where he taught materia medica and medical botany.

During the civil war he was brigade surgeon under General Augur, Assistant-

Medical Director of the Army of the Potomac, and Medical Director of the Gulf Department of the Nineteenth Army Corps. At the close of the war he was breveted Lieutenant-Colonel. Returning to Chicago he assisted in the reorganization of the Health Department of that city, and in 1867 was appointed Sanitary Superintendent.

During his five years of service in this office, the most notable event was the great fire, and upon him devolved the responsibility of organizing and carrying out the sanitary provisions for the great army of homeless citizens. The Illinois State Board of Health was created in 1877, and as one of its members, Dr. Rauch was elected its first president.

It was as an authority on sanitary subjects and as a practical hygienist that Dr. Rauch is best known to the medical world, but in other respects he was a scientist of no mean qualifications. A friend and pupil of Louis Agassiz, and while still living in Iowa, Dr. Rauch investigated and collected scientific material from the upper Missouri and Mississippi rivers for Professor Agassiz, and a report of his work was published in *Sillimans Journal* in 1855. He had previously published a report on the "Medical and Economic Botany of Iowa." Dr. Rauch was likewise the author of numerous monographs on subjects of sanitary science and preventive medicine. His best work as an author will be found in the eight volumes of the Illinois State Board of Health Reports.

Higher medical education owes much to Dr. Rauch. For it was very largely due to the action of the Illinois Board of Health, under the Practice of Medicine Act suggested by him, that medical institutions raised the requirements for graduation and increased the length of their teaching sessions. The general acceptance of the system of requiring a four years' graded course of study preliminary to graduation in medicine, was a crown for hard labor such as is seldom received by the laborer during life. Dr. Rauch was accorded the gratification of knowing while yet alive, that the good he had done would live after him and not be interred with his bones.

ABSTRACTS.

AMERICAN ACHIEVEMENTS IN SURGERY.

What may be considered as the first epoch in American surgery was the American discovery of Etherization, which was effected conjointly by Morton, Jackson and Wells. Until that time, almost within the recollection of the older practitioners of the present day, the patient who was the subject of a surgical operation suffered untold tortures of pain during its performance, instead of being, as now, rendered absolutely unconscious during the entire ordeal. When a student, the writer often heard the recitals of the experience of older men who operated before ether was known. The vivid description by Valentine Mott, of the sufferings of the poor victims, would touch the sympathy of the hardest heart. To transform such ordeals of agony into peaceful, dreamless sleep was for American surgery a triumph second to none in the long category of its other brilliant achievements. In fact, it was the starting point of all the subsequent possibilities of almost miraculous ventures.

During the late war of the Rebellion America made her next grand record by notable work upon the battle-field and in the hospital. The major operations performed during that period were commensurate with the vast number of wounded requiring surgical aid. Never before in the history of any war were so many so successfully or promptly cared for. Indeed, after the elaborate records were finished, and the results published, it was

asserted by a leading spirit in the French Academy that America held the surgical scepter of the world. Attesting the truth of this is the remarkable collection of specimens in the Army Medical Museum Washington, which is unequalled in variety and number anywhere on the globe. The elaborate histories of these silently impressive texts established new principles of procedure which were hitherto unknown to the scientific world, and gave American surgery a just recognition for originality of conception, boldness of execution and success of practice. With a training equal to any emergency, while ever ready to adopt and enlarge upon the views of others, she has not been slow in advancing on new lines and securing new triumphs. The aim has been to simplify methods, and thus give them a greater adaptability and a wider practical application. In the treatment of fractures, for instance, this is strikingly manifest in the discarding of cumbersome apparatus and the substitution of simple and more effective ones. There is hardly a bone in the body, which, when broken, has not been beneffited by the American plan of treatment. Notably prominent in this category may be mentioned fracture of the thigh and of the shafts of other long bones. It was reserved for Gurdon Buck, a former surgeon of the New York Hospital, to prove that fractures of the thigh could be most successfully and comfortably adjusted by replacing the complicated harness of straps, stretching-screws, and heavy splint braces, with the simplest form of weight-and-pulley extensions.

The demonstration of the utility of plaster-of-paris splints was likewise made by an American surgeon, the late Dr. James L. Little, who years ago brought it to its present state of perfection. The same principle of fixation was also adopted in an original way by Dr. Lewis A. Sayre, also an American, to the treatment of diseases and deformities of the spine, by encasing the trunk in a plaster corset. The simplicity and effectiveness of this treatment are now so well established that Sayre's plaster jacket is indorsed by every surgical writer and used by every surgical practitioner. The same may be said of his original tieatment of the collar-bone, and of his methods of extension of hip diseases. The ready adaptability in the American mind to the notable advance in surgery has been shown in the matter of aseptic surgery first advocated by the distinguished Scotch surgeon, Sir Joseph Lister. During a visit to this country in 1876, Lister explained his doctrine, demonstrated its application, and proved its grand results. America was the first to feel the real impulse for good which this discovery made tangible. By its means operations became feasible which before were never dreamed of, and results were obtained which were previously beyond the reach of human endeavor.

Take the advances which have been made in abdominal surgery and for which America can claim no small share of credit. In fact, this country may be said to have originated all the wonderful possibilities connected with this special line of practice. The first one who dared to invade the abdominal region with a knife, and lay bare the vitals, was a Kentucky surgeon, Ephraim McDowell. From the time of the successful performance of that operation in 1809, for the removal of an intra-abdominal tumor a new field was opened for the mitigation of suffering and saving of life, the cultivation of which has prolonged the average human existence several thousand years. The work of McDowell, when its importance was duly appreciated, opened up a new field of practice which has widened into a distinct and almost exclusive department of surgery our work has been fully abreast with that of our transatlantic brethren. In the treatment of internal troubles by instrumentation, many other important discoveries have been made in this country during the past few years. Sims's speculum is known and used throughout Christendom. Another equally famous instrument is Bigelow's lithotrite for crushing vesical calculi, and his ingenious evacuator for disposing of *debris*. Both of these instruments so revolutionized the old system of practice in the particular lines for which they are adapted that nothing now takes the place of the American contrivances. It is within a very short period that O'Dwyer's intubation tubes for the treatment of suffocative croup put in their claim far recognition, but they are now almost universally used in all the class of cases for which they are so eminently suitable.—*Dr. George F. Shrady, in the Forum for April.*

SOCIETY REPORTS.

THE LOUISVILLE CLINICAL SOCIETY.

January 30th, 1894.

[Stenographically Reported by C. C. Mapes, M. D.]

CASE OF ACCIDENTAL HERNIA.

DR. P. GUNTERMANN: The case I am going to report is one which is very peculiar. It shows how quickly a person may be taken deathly sick; it shows also if the nature of the trouble is not recognized, how seriously it may reflect upon the character of the attending physician. I was called about a week ago, at midnight, to see a young man seventeen years of age, who was reported to be suffering from "cramp of the stomach." When I saw the patient I learned that he had recently gone through an attack of typhoid fever, making a very slow and tedious recovery. He had finally recovered, and for a few weeks had been in ordinarily good health. The evening I was called he had eaten a hearty supper; he attended school that night and came home feeling perfectly well. He went to bed and soon after was taken with violent pain in the stomach; directly he began to vomit and purge. His people, thinking it was an ordinary attack of something like cholera morbus, made hot applications, gave him hot whisky, etc. He continued to grow worse, and at twelve o'clock I was called in. I found him suffering with intense pain, which he located at about the pit of the stomach. I asked him if he had a rupture or ever had one, and he said, "No." I thought my first business was to relieve his intense sufferings. He had vomited a great deal and purged several times, so that the stomach and bowels must have been well emptied, and I did not think it necessary to relieve him in that way. I gave him a hypodermatic injection of ¼ grain of morphine with 1-150 grain atrophine, and then made a careful examination of his abdomen, but could discover nothing wrong. I then sat down to write a prescription, and while doing this he commenced vomiting again, and had a frightful retching attack. When this was over he said, "Oh, Doctor, there is a bone coming out of my side." I went to him and found in the left inguinal space a rupture as large as my fist. With some little difficulty it was reduced, and the pain subsided. With the reduction of the hernia, not only did pain subside in that location, but there was also entire disappearance of the pain about the stomach, and the other symptoms. I thought at the time that possibly the vomiting and the diarrhœa were influenced by a partial rupture, that the bowel had entered the internal ring, then during the last effort of vomiting it had made its exit, and after it was reduced every symptom of vomiting and purging subsided. The next day I sent the patient to a truss-maker to have a truss adjusted, and he has not had an untoward symptom since.

I want to say that if I had left the patient perhaps two minutes sooner; if the pain had not been very severe; if he had not noticed the rupture protruding at the time, by the next morning it might have developed into a very serious case of rupture, requiring an operation or some other radical measure, and the result might have been a serious reflection upon my diagnosis of his condition.

DISCUSSION

DR. W. H. WATHEN: Had the patient ever observed any indications of hernia preceding this attack?

DR. P. GUNTERMANN: There was not the slightest sign of a hernia until the last violent attack of retching, when it simply popped out.

DR. W. H. WATHEN: The case is very interesting, and it is now easy to understand what caused the vomiting and diarrhœa. A part of the bowel had become constricted in the internal ring, causing these troubles which the Doctor has described. Such symptoms are common in hernial protrusions. The strain produced by retching forced more of the bowel into the sac, and dilated it to such an extent as to make it perceptible both to the patient and physician; but I am inclined to the opinion that this man, if the case could be looked into carefully had a hernia before, for the reason that the sac would have been so small that I do not think it could have been enlarged so suddenly to the extent Dr. Guntermann states. We often fail to get the accurate history of troubles of this sort from patients.

DR. J. W. IRWIN: It seems to me that the pain, vomiting, and diarrhœa were all due to irritation of the bowels, and that it was a hernia from the beginning. I do not see any positive reason why the first rupture may not be large. Generally speaking they are not large, but I have seen some ruptures with history pointing clearly to that condition that were as large as a man's fist at first. But

Dr. Guntermann's report of the case shows how careful we should be in diagnosticating the cause of pain in the bowels and vomiting, in some cases.

GASTRIC ULCER.

DR. J. M. KRIM: Mr. V. S., aged fifty-two years; married; occupation florist; family history good; had never been sick since childhood. He commenced complaining about the middle of January, 1892, with pain in the stomach and back, which came on at intervals of two to four days; constipation marked; appetite good. This condition of affairs lasted for about two months, when pain came on at shorter intervals, more severe in character; food was vomited shortly after eating. There was loss of sleep and appetite, and loss of flesh, about ten pounds in six weeks. He had taken various remedies without benefit.

Patient consulted me early in April. Examination revealed the following: Condition very anæmic; skin flabby; pulse 90 and weak; respiration 25; temperature normal; urine normal; constipation; tired feeling, not able to work; insomnia; dull aching pain, with burning sensation in the epigastrium; pain more intense on pressure, a little to the right of the median line; stomach enlarged, pain more severe after eating, with some relief after vomiting of food; considerable thirst. Diagnosis: Gastric ulcer.

I placed him on bismuth and chloroform mixture (bismuth subnit. grs. xx, chloroform gtt. x, water $f\overline{ss}$) to be taken every two hours until there was some relief; ordered absolute rest, with milk diet. I was called in haste about six o'clock in the evening and found the patient almost pulseless, very pale, scracely breathing, extremities cold and vomiting large quantities of blood. I applied ice to the stomach and gave it freely by the mouth. I also injected three grains of ergotin, whiskey, and aromatic spirits of ammonia, which was repeated as indicated, using warmth to the extremities. Patient rallied after eight hours of hard work, hæmatemesis ceased and he rested comfortably. The following day he had a copious tarry-looking evacuation, pulse good, no pain. The bismuth and chloroform mixture was continued and an enema was given to cleanse the bowel for rectal feeding (peptonized milk and beef). The patient did well for four days, when he had another small hemorrhage which was easily controlled. Rectal feeding and the mixture were continued. On the third day after this I resorted to stomach washing with chloroform water ($f\overline{ʒj}$ to Oj, twice a day for a week, then once a day for two weeks), which made the patient feel very comfortable, and continued the mixture every three to four hours, allowing small quantities of peptonized milk and beef, which was relished. Rectal feeding was discontinued and the patient kept on liquid food exclusively for three weeks, then allowed small quantities of solid food, which gave him no discomfort. He was put upon reconstructives and made a slow but uneventful recovery, gaining flesh and good color. He was under my care about three months then, having removed to tpe country. I heard no more of him until in August, 1893, when he informed me that he had been entirely well until about two months before, at which time he began to feel badly and being advised by friends to go to some watering place in Germany, he came to ask my advice. I readily approved and he left the following week, remaining abroad about two and one-half months at various watering places.

After his return I was very much astonished to note his decided emaciation and generally unfavorable appearance. He informed me that he had consulted Ewald and various other prominent practitioners abroad without any relief. He received no treatment after his return. On December 2d, 1893, he had a severe hemorrhage and died before I reached his residence.

Autopsy revealed the following: Stomach contained about a half-pint of blood; there was considerable narrowing of the pyloric orifice. About two and one-half inches from the pylorus, on the anterior surface, there was a stellar cicatrix one-half inch in length by three-quarters inch in width, with hardened edges and involving the muscular coat. At the cardiac end there was a soft mass two inches long by one inch wide, projecting about one-quarter inch above the mucous surface. In the centre of this was an irregular, apparently recent, ulcer, about one-quarter inch in diameter, in the centre of which was a small perforation. I removed a piece of the mass, had it examined, and was informed that it was a medullary cancer.

I used Hofrath Stepps' idea in regard to the cloroform and bismuth mixture. He claims that ulcers heal more rapidly under this treatment than by any other method he has tried, having had some four years' experience with the mixture.

DISCUSSION.

DR. J. W. IRWIN: The case detailed by Dr. Krim is an interesting one, and if a microscopical examination had been made it would have been still more interesting. The diagnosis in the main was correct, but the treatment of the case was less judicious in that solid food was resumed by the patient too soon. The cause of the ulcer seems to have been malignant disease of the stomach, and that was possibly the cause of the narrowing

of the pylorus. It has been my experience that gastric ulcers, even when not complicated by malignant growths or malignant formations, do not heal in three weeks or three months. It takes a much longer time. When I have seen such cases, and I have not seen a great many, I have advised the patients to remain under treatment—and very little treatment at that other than a regulation of the diet, clothing, attention to their environments, etc.—for a period of at least eighteen months before what would be called a permanent cure of these disorders can be affected.

A patient having a simple gastric ulcer came under my care six or eight years ago. The ulcer had been in existence then three years, but was not diagnosticated until after I saw the case. The patient, a lady, was very much emaciated and feeble. I sent her to the Norton Infirmary where she remained six weeks. Her diet consisted of very limited quantities of milk and cream. A satisfactory diagnosis of the case was established and she was put on the way toward recovery, When she came under my care she had frequent small hemorrhages, every time she partook of solid food it was ejected mixed with blood. The blood vomited was usually darkened by the action of the gastric juice, From the time she began to use the cream diet she had no more hemorrhages, and in the six weeks she remained in the infirmary she gained six pounds in weight. I advised that she continue the use of the milk and cream diet, the quantity to be gradually increased until it reached three and one-half quarts of milk per day. I suggested that to this quantity of milk she might add one pint of cream. She followed the advice given her for eight months, and did not depart from the instructions to avoid taking any solid food. At the end of that time, a relative visited the family and persuaded her that dieting was all nonsense and that she was starving herself to death, although she had then gained eighteen pounds in weight. This relative urged her to partake of the elaborate dinner that had been served in his honor, and she did so. In less than a half hour after eating, she became nauseated and vomited the food and about a pint of blood. She was greatly prostrated as a great deal of blood passed from the stomach into the intestines as was shown by a subsequent evacuation of the bowels. She came to Louisville on the following day and reported what she had done. I advised that she continue the milk diet. Once, about six months afterward, she ate two crackers, which was followed by vomiting mixed with blood. She then concluded that she would not again use anything but milk. While using milk and cream she had no vomiting at all I gave her no medicine of any kind. The bowel became constipated by the use of the milk and was relieved by large enemata of tepid water. She continued the milk diet for eighteen months, I then advised her to take very small quantities of baker's bread to begin with, gradually increasing the quantity, still keeping up the use of milk and cream. She had no more vomiting and no more pain after the use of food. The regular diet of mixed food, such as she had been in the habit of using before, was gradually resumed and there has been no return of the gastric ulcer in six or seven years. I heard from her a day or two ago, she is very strong and well and has gained forty-three pounds in weight from the time she first came under my care.

This case illustrates all the other cases of gastric ulcer pure and simple I have not seen a case of gastric ulcer get well in so short a time as three weeks or three months. If I understood the essayist correctly, after three weeks treatment he allowed his patient to take solid food. The point I want to make is that if it was a gastric ulcer pure and simple, the patient was ordered to resume solid food too soon. As it was, it did not make much difference, as the trouble was malignant and not a simple ulcer. Every case that I have seen unattended by malignancy, I have always considered it wise to keep under dietetic measures for about eighteen months before I could hope for a cure.

DR. P. GUNTERMANN: I have seen several cases which I thought were gastric ulcer; some of them died in the course of due time and two of them recovered. These two cases I treated by rectal feeding altogether for quite a while, then commenced gradually with liquid foods. I first gave milk diluted with lime water, making it as alkaline as possible, I gave no medicine to speak of. Some morphine was given hypodermatically for the relief of pain and, to assist the healing process, I have given lime water and carbolic acid, which I regard as one of the best antiemetic remedies that can be used.

I had one case that I diagnosticated as gastric ulcer and treated for a while; the man gained in weight: he had become strong, able to follow his occupation and my visits ceased. After a few months I was called to see him at his home. He was then quite ill; he vomited all the food taken into the stomach and had several times vomited blood. He had intermittent pain, not the continuous sharp pain that usually attends gastric ulcers. I then became a little dubious as to the nature of the trouble. Vomiting and pain continued, and in the course of time he died. I had an opportunity to make a *post-mortem* examination, and found the pylorus complete closed by an indurated mass as large as a child's head.

I do not think dilatation of the stomach is usually present in gastric ulcers. I do not believe it is according to the teaching of the best authorities to wash out the stomach in gastric ulcer.

DR. T. P. SATTERWHITE: The foregoing remarks recall to mind two cases which occured in my practice several years ago. The first was a German lady; when I saw her she was greatly emaciated, had all the appearance of cancerous cachexia, was unable to retain food, but there was no vomiting of blood. She was under my care for twelve months. I put her upon equal portions of milk and Carlsbad water and she was entirely relieved with that treatment alone. When the Carlsbad would act too freely, we substituted Vichy. She grew to be as stout as she ever was, weighing about 160 pounds.

The other case was a man who was treated in the same way at the St. Mary & Elizabeth Infirmary, he gained some flesh, and was sufficiently improved to be sent home. He died some time afterward, however, and like the case reported by Dr. Guntermann, *post mortem* examination revealed a cancerous condition of the pylorus.

DR. J. M. KRIM: The case referred to in my paper did not get well in three weeks by any means. I kept him on a liquid diet for three weeks, then allowed him a small quantity of solid food, which did not appear to give any discomfort, The stomach washing with chloroform and water was carefully carried out according to the idea of Steeps, who has had quite an extensive experience in the treatment of gastric ulcer. The chloroform and bismuth mixture is also recommended by Steeps; he claims that healing of the ulcer takes place much more rapidly under treatment by this mixture than anything else he has tried. The patient was under my care about three months, then he moved to the country; he gained in flesh while he was under treatment. I washed the stomach for about four weeks, twice a day for the first week, and after that once a day. As solid food in very limited quantities gave him no inconvenience, it was allowed, but the milk diet was continued.

Dr. Irwin evidently did not understand me correctly. I stated in my paper that the patient first commenced to complain in January, 1892, and consulted me in April of the same year. He was under my care about three months, then removed to the country and I saw no more of him until April, 1893, when he simply consulted me in reference to the advisability of his taking a trip abroad. I did not prescribe for him at this time, and he received no treatment after he returned from Germany. I was called hurriedly to see the patient, early in December, but he died before I reached him.

I firmly believe that the first trouble was simple gastric ulcer, which was entirely relieved by the treatment as stated in my report. But when he consulted me on the second occassion (in August, 1893) at the time he went to Europe, I believe the condition was cancerous. In other words the primary condition was that of a simple ulcer, and the cancerous trouble which developed later was secondary.

No history was obtained prior to the first appearance of pain (January, 1892) except that the man had always been in perfectly good health.

SARCOMA OF THE TIBIA—AMPUTATION—RECURRENCE OF THE GBOWTH IN THE PERICRANIUM OVER THE PARIETAL BONE—REMOVAL —RECURRENCE.

DR. W. O. ROBERTS: I saw with Dr. Krim in December, 1898, a girl, seventeen years of age, who six months previously had her right limb amputated above the knee because of sarcomatous disease of the tibia. The wound healed nicely and she had no further trouble until November 1893, when she received, as the result of a fall, a slight bruise on the side of the head, which, however did not seem at all serious. In the course of ten days after receipt of the injury to her head, a lump began to make its appearanee. At the end of six weeks, when I saw the patient, there was a tumor as large as a man's fist situated on the left side of the head over the parietal bone. She had some numbness of the right arm and the stump of her right limb. Dr. Krim had aspirated the tumor, but nothing was secured save a little blood. We were satisfied before any operative interference was undertaken, that the growth was a sarcoma, starting, as we thought, in the pericranium. We advised operation as the only chance of prolonging life, and in the early part of December I operated at the Norton Infirmary. After having shaved the entire scalp, I made a horse-shoe flap and exposed the growth and, as we had suspected, it started from the pericranium, After removing the growth as we thought entirely, we scraped the bone which contained a carious spot, at about the size of a silver quarter, due evidently to pressure, and replaced the flap. The wound healed by first intention throughout its entire extent. The girl was sent home then, and after remaining entirely well for three weeks, the growth has recurred in about the same locality and is now developipg very rapidly; it has already attained the size it was at the time of the operation in December.

Under the microscope the growth was found to be a small round cell sarcoma.

GUAIACOL FOR REDUCTION OF TEMPERATURE.

DR. J. W. IRWIN: Some days ago I saw an account of a remedy for the reduction of the temperature in typhoid fever, which is to be applied locally. The article was a lecture delivered in the Pennsylvania Hospital by Dr. Da Costa, of Philadelphia. He reported a case of typhoid fever as a type of the disease that he had treated by means of guaiacol. I had a case of typhoid fever, thirteen days sick, and in which the temperature was ranging from 103° F. in the morning, tn 104.°5 F. in the evening. Sponging thoroughly with cold water, ammonia, etc. several times a day did not keep the temperature below 103° F. Dr. Da Costa used in such cases guaiacol over the iliac region, applying it with a camels hair brush and then had it thoroughly rubbed in by the hand of the nurse, for from five to fifteen minutes, until the skin became saturated with it. The skin had previously been cleansed with soap and water. Then a dressing of wax paper was applied so as to hold it as long as possible in contact with the skin. He raised only one objection to its use and that was its odor. The best thing which he found to disguise the odor was oil of cloves. This I used, but the odor of the guaiacol was still quite pronounced. The application was made yesterday morning at ten o'clock. There was no change in the temperature until about eleven o'clock. When the application was made at ten o'clock the temperature was 103°F., at eleven oclock it had fallen to 101°F. At twelve o'clock it was found to be 97.5°F. and at two o'clock in the afternoon 96.5°F. There was no nervous depression whatever; there was no material change in the pulse, if any thing it grew stronger. The patient felt cheerful. The temperature remained 96.5° to 101 F. until ten o'clock at night. At three o'clock in the morning the temperature again went up to 104° F. rather suddenly. Guaiacol was again applied and an hour afterward the temperature was reduced to 98° F. and did not go above 98° F. until ten o'clock the next day. It has not been above 101° F. since that time. Two applications of guaiacol have controlled the fever in this case for twenty-six hours. How it acted I cannot tell. Dr. Da Costa thinks that it is absorbed by the skin and then finds its way to the centers which control the heat. The quantity of guaiacol used was thirty drops at each time. The author recommends thirty drops as the maximum quantity for each application, but he has used sixty drops with the result of producing too much depression of the temperature. He has used it in tuberculosis of the lungs and catarrhal pneumonia, with less effect than in typhoid fever, the temperature falling two or three degrees. He has also used it in malarial fever where the temperature went up to 104° F. and the reduction was very pronounced, it falling, if I remember correctly, to 93° F.—in this case he used from forty to sixty drops But he thought in cases where the temperature did not go above 102° or 103° F. that twenty drops would be enough. He was led to resort to this treatment, not because he disapproved of the water treatment, such as the cold bath, wet sheet, or sponging, but because he believed it to be one of the most important agents for the reduction of temperature in certain forms of typhoid fever. The water treatment, he says, has its disadvantages as moving the patient tends to produce hemorrhages of the bowels and in other ways the patient is often made worse by the bath by reason of the fact that he is not able to be moved under certain well-known conditions. In those cases where it would not be advisable to resort to the bath or wet sheet, he recommends the use of guaiacol. He thinks as a local remedy the possibilities for guaiacol are very great, although he has not yet used it in a sufficient number of cases to determine definitely. He says that guaiacol prevents the return of the high temperature very much longer than the water treatment, this of course is in favor of guaiacol as against the cold bath, wet sheet or pack. The observation I have made in this single instance is most gratifying to me and it fully agrees with the observations of so eminent authority as Dr. J. M. DaCosta.

DISCUSSION.

DR. T. P. SATTERWHITE: Would not it be better to commence with say fifteen or twenty drops of guaiacol and then increase the quantity if necessary?

DR. J. W. IRWIN: Even the reduction of temperature to 96° 5°F. in the case I have reported, was not attended by any signs of depression whatever. The pulse was not changed except that it became a little fuller and stronger. The pulse was 108 at the time the first application of guaiacol was made. The prescription was thirty drops of guaiacol and five drops of oil of cloves.

SUPER-FŒTATION.

DR. W. H, WATHEN: I recently attended a woman in an abortion where conception occurred in a womb containing a large fleshy mole. Two years ago, this woman placed herself under treatment for retro-version of the womb, with great enlargement, but with no adhesions or disease of the adnexa. The womb was very easily replaced in its natural position and held there by a pessary which gave relief. She became pregnant and the pessary was removed at the end of the third month. The womb then remained in position and continued to enlarge until it was the size of a three and one-half months pregnant

womb. It grew no larger and then began decreasing in size, and in six weeks had returned to its retroplaced position. Hemorrhage then began and continued for a week or ten days, when I was called to see her. She was suffering severe pain and the bleeding was profuse. The neck of the womb was dilated sufficiently to admit my finger, and I could feel a solid mass but no fœtus. The vagina was thoroughly cleansed and with a forceps I removed a fleshy mole about the size of a turkey's egg. The os uteri was imperfectly dilated, and the mole was taken away in several pieces. She recovered from the abortion and the womb was again held in place by a pessary. She menstruated regularly until about ten months ago, when she again consulted me, having all the symptoms of pregnancy. The womb continued to enlarge and at the end of three months the pessary was not needed to hold the organ in position.

At the beginning of the fourth month she had hemorrhage which continued for nearly a month. I now found that the womb had grown considerably smaller, and had again become retroverted. After a few weeks she menstruated and was regular for two months, when she again missed her menses for three months. Her womb enlarged and could be felt above the pelvis. She began bleeding again, and the womb grew smaller. The hemorrhage continued for three weeks, when her husband came for me stating that his wife was flooding and suffering severely. I found she had aborted, the embryo being about seven to nine weeks developed and in a state of decided decomposition, and the odor very offensive. The decidual membranes were removed and having cleansed her thoroughly, I expected no further trouble. Two days afterward her husband came for me and said that his wife was suffering intense pain. Before I reached the house she had expelled a hard, fleshy mole about the size of a turkey's egg, showing no signs of decomposition and having no odor, convincing me that I was correct about the first pregnancy, The embryo having died, the fluid was absorbed, and the membranes developed into a fleshy mole. The second pregnancy resulted, the embryo finally died and was expelled. The last abortion was about two months ago and the woman has recovered nicely.

DISCUSSION.

DR. T. P. SATTERWHITE: I would like to inquire if there was any menorrhagia, and what Dr. Wathen proposes to do in the case.

DR. W. H. WATHEN: There was no menorrhagia; the periods were normal. It is best to perform some kind of operation to hold the womb in position. I do not think the Alexander operation would do any good because the uterus is so large that it would stretch the round ligaments and again become retroverted. I do not believe she will consent to any operation, but I would recommend anterior ventral fixation, having first thoroughly curetted the womb and tamponed it with iodoform gauze.

DR. P. GUNTERMANN: I would like to know why, when this woman had the second abortion, and you did not find anything coming away, you did not look for that which ought to come away, the membranes, etc.

DR. W. H. WATHEN: At the second abortion the decidual membranes came away, and were so decomposed that the odor was very offensive. The placenta is very small at seven or eight weeks.

The Treatment of Whooping-Cough by Bromoform.

According to the *Revue Internationale de Bibliigraphie Medicale*, Pelicer has employed bromoform with very good results in the treatment of this obstinate affection. It is a colorless liquid, produced by the action of bromine on alcohol in the presence of a base. When administered to animals by inhalation or hypodermic injection, it produces narcosis, without greatly disturbing the respiration or circulation. The dose is 1 drop for each year of the patient, given four times a day, but this dose should be increased progressively until it is taken many times a day. He has given as much as 48 drops a day during six days to a child of two years, but after this dosage he observed a general erythema, but no diarrhœa. There was increased frequency of the pulse and respiration. Bromoform diminishes the number of the attacks and their duration. Under its influence the vomiting ceases and the appetite returns. It is to be employed during a period of two or three weeks. In a number of cases he used it even longer than this.

Exclusion of Daylight in the Treatment of Small-pox.

Finsen (*Hosp. Tid.*, No. 27, 1893) has made some observations on the effect of light on the skin. He referred to the good results obtained by Black and others by the exclusion of daylight in the treatment of small-pox, but argued that, as Widmark has shown that it is the ulta-violet rays which have the strong chemical action, it is not necessary to exclude the daylight, but by using red curtains tightly drawn or red window-panes, the injurious effects of the light can be prevented. The correctness of this hypothesis was proved by Svendsen, of Bergen, who last summer treated four cases of small-pox in unvaccinated patients by covering the windows with thick red wollen curtains. The patients escaped the suppurative stage; there was no rise of temperature, no œdema. The patients passed from the vesicular stage, which was slightly prolonged, into convalescence, and escaped scarring.—*British Medical Journal*, February 17, 1894.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE BUFFALO MEDICAL AND SURGICAL JOURNAL

for April, contains an editorial showing the result of changing the water supply from the Niagara river to the inlet, communicating with the harbor, and pumping from an old unused reservoir. This was done during the month of February, and during the first week of March two-hundred new cases of typhoid fever were reported, while previous to this date the number reported conformed to that of other years.

A significant fact is, that one part of the city escaped with only one case, and that part had the same variety of inhabitants, homes, manner of living, etc., as the rest of the city except that its water supply was independent and came from natural springs.

In the same journal Dr. James F. W. Ross reports a case of

Suppurating Myoma of the Uterine Wall.

for which he operated five weeks after confinement. The growth proved to be an intramural fibroid, about the size of a child's head, and left a very perceptible cavity in the uterine wall, palpable through the abdomen.

The case is reported because the wall at the point of attachment, extending from the fundus to the internal os, was left so exceedingly thin that it did not seem possible that pregnancy could terminate naturally at any future time, and the author has lately heard of the safe delivery of twins.

Dr. I. N. Love writes about

Neurasthenia,

which he believes to be a term often misapplied, and thinks nerve weariness is quite different from nerve exhaustion, and generally due to over eating and constipation; perhaps, combined with anxiety and laziness. Proper regulation of the diet, free purgation for a week or so, properly graded exercise, a greater supply of fresh air, and possibly the relief of peripheral irritation, would, the author, thinks, cure many attacks of so-called nervous exhaustion.

Dr. Herman Mynter gives some clinical reports of very interesting cases which have required

Trephining.

In one he was able to replace a one-and-one quarter inch circle of bone, and in several he placed irregular fragments in the opening, and prevented thereby the union of scalp and dura mater, suppuration compelling the removal of these nuclei in only one instance.

On several occasions the author attempted the use of gold leaf to close the opening in the skull, but irritation and pain always forced its removal; plates of celluloid were free from this objection.

The author considers the use of antiseptics, even in exceedingly weak solution, very objectionable in brain surgery. Sterilized water, has in his experience given perfect satisfaction, whereas, the chemical solutions did not.

The cases cited comprise subdural hemorrhage with aphasia and paresis, abscess of the brain, and traumatic epilepsy; all ended in recovery both from the operation, and the cause of the operation.

Dr. Edward B. Angell reports the result of an autopsy on a woman of thirty-four years, who when five years old suffered a

Sudden Right Hemiplegia During Convalescence from Scarlet Fever.

Recovery occurred from the hemipleyia, but the right arm and hand never fully developed. Two and one half years before her death symptoms of cerebellar tumor appeared, but no operation was performed.

The autopsy revealed an encapsulated gliosarcoma two ounces in weight, spherical, lying between the right cerebellar hemisphere, the right temporosphenoidal, and the occipital lobes, and pressing on the corpora quadrigemina.

The right crus cerebri, the pons, and the medulla were pressed on by the growth. The left cerebral hemisphere contained a large cyst, the sequel of the trouble in childhood, and was one-fifth smaller than its fellow, while the right side seemed to have the convolutions, sulci and gray matter all developed, to take the place of the deformed left.

The right cerebellum was in keeping with the left cerebral hemisphere, confirming the theory of their development in unison.

The author describes also, the gradual learning to speak again, and the failure to develop the muscular system so as to dance, or even run easily.

IN THE JOURNAL OF NERVOUS AND MENTAL DISEASES

for March, Dr. E. M. Green reports a case of

Hysterectomy for Procidentia.

The patient was fifty years of age, the subject of chronic mania, and had been in the asylum for ten years. During all of this time she was noisy, filthy, destructive, and even by the use of hypnotics obtained only a few hours' sleep.

She had suffered for some time from complete prolapse of the uterus, had a cystocele and rectocele and suffered much from loss of blood from vaginal ulcers.

Attempts to return the uterus and keep it in position failed on account of the patient's interference; hysterectomy was performed, therefore, under very unfavorable conditions, but the patient nevertheless was up at the end of six weeks looking much better.

In about two months her habits and mental condition began a rapid improvement. No recurrence of cystocele or rectocele took place, and the author states that she is now a well behaved patient and has not required a hypnotic for about five months.

In the same number Scheinmann is quoted from the *Berl. Klin Wochensch.*, stating that a common, and often unsuspected, cause of persistent headache is some nasal trouble, which being relieved puts an end to the headache.

He declares headache to be frequently the only early symptom of severe nasal disorders, that the demonstration of nasal origin permits a favorable prognosis, that in all cases of headache of unknown origin careful examination of the nose is required, and that the extistence of neurasthenia does not exclude a local cause for the headache.

IN THE SANITARIAN

for March, is an article by Fraenkel (from the *Deut. Med. Woch.*) relative to the

Effect of Thymus Cultures of Eberts' Bacillus,

rendering animals free from infection by this disease. Fifty-seven cases of typhoid fever in man were treated as follows: Thymus cultures, proved to be sterile by experiment, were heated to 63° (R.) and 0.5 c. c. injected into the iliac region, (afterward the glutei were found preferable).

No change was noted on the first day; on the second the dose was doubled, and caused rise of temperature and shivering. On the third day the temperature fell, and again on the fourth; but if the treatment were not confined it would now rise. The temperature was used as the guide for treatment, and when there was no rise, injections were given at intervals of two days, an increase of 1 c. c. being made each time. The fever became intermittent, and in a short time there was a pyrexia. With the fall there was profuse diuresis and sweating, and a lessening of the diarrhœa.

The patients seemed convalescent, while still having enlarged spleen and the rose-colored spots, and fourteen or sixteen days after defervescence were able to be up. The treatment was successful in relapses, and produced a uniformity and rapid improvement, not to be obtained by other means.

To settle the question of sterilized culture of micro-organisms, having no connection with the disease, favorably affecting its course, a few were tried, and seemed again to act favorably. The culture medium was prepared from the thymus here also.

THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES

for April, contains an interesting paper by Dr. J. M. DaCosta, on

Cardiac Asthenia, or Heart-Exhaustion,

meaning by this that condition in which there is for a long period habitual feeble action of the heart, and where this constitutes the essential and only appreciable disorder. This heart-feebleness or heart-exhaustion comes, he says, from two causes: it is due either to nervous failure or to a weak heart muscle; in some instances to a combination of both.

The affection generally manifests itself in those whose nervous system has been strained by worry or overwork. It shows itself frequently by a veritable and sudden cardiac collapse, though the causes that have led to this become apparent enough when inquired into, and there have been warning signs. The patient is obliged to stay in bed; all attempts at sitting up produce a sense of swooning and vanishing pulse, or there is actual fainting from time to time. The heart's action is feeble, the pulse is very small and compressible, and generally increased in frequency; there is a sense of uneasiness in the cardiac region, but very rarely actual pain; the extremities and the nose and ears are cold; the general temperature is below the normal. The capillary circulation is poor, the skin pale, occasionally injected or flushed; sweating is the exception. The breathing is conspicuously unaltered, although there may be a sense of oppression. The reflexes are unimpaired or sluggish. The appetite is poor, though there are no marked gastric symptoms; the bowels are constipated. Insomnia may be complained of; apprehension and low spiritis are very common. From this state of depression and disturbed circulation the patient rallies but slowly. It is one or two months before he can sit up without inclination to faintness, and months more before he recovers. The course of the disease is as markedly chronic as the onset has been markedly rapid.

The heart's action is mostly accelerated, but not irregular. It is very variable, always rises markedly after meals, and is influenced by the slightest exertion. The physical signs of the heart disorder are very significant. There is no increased percussion dullness, the impulse is feeble, difficult to find, not diffuse. The first sound is short, lacking in volume, and may be obscure or short and valvular; the second is not accentuated. Rarely there may be functional apex murmurs of dynamic origin, and these murmurs may be brought out by suddenly closing the hand tightly. A sensitiveness to touch in the cardiac region is at times noticed.

The author is inclined to attribute the cardiac weakness more immediately to disturbances in the cardiac ganglia than in the centres in the medulla and to the disordered inhibitory influence of the vagus, though he grants that the central nervous system is affected.

In the asthenic nervous heart the prognosis is good. Under treatment and in time they all recover. While there is danger from so-called heart failure the author has never met with an instance. With a heart weak from muscular weakness the same is not true, the author reporting a case in which with only a very moderate amount of bronchitis, a sudden and unlooked-for fatal collapse occurred.

For the cases of the asthenic weak heart, rest in bed is essential, and when the patients are able to sit up, nothing does as much good as graduated shower baths. Massage is useful at a later stage of treatment. Where the weak heart depends on muscular weakness, massage and Swedish movements can be resorted to from the beginning. From Swedish movements that are especially adapted to promote the flow of blood and to strengthen the heart, the author has seen great good. The food should always be as nutritious as possible, taken as frequently and in amount as large as the digestion will tolerate, and stimulants have often to be resorted to. The tendency to constipation should be remedied by diet and light laxatives.

Among drugs strychnine stands pre-eminent. It should be given in doses of one-thirtieth of a grain, three times a day, and continued for some time. Iron is only needed to combat any complicating anæmia and its tendency to constipate makes it a remedy of doubtful advantage. Arsenic in the nervous heart comes next to strychnia. Its action cannot be explained by its removing anæmia, for it proves to be valuable where the blood-count shows this not to exist. Of the so-called heart tonics, digitalis is the best, but it is not the certain remedy that might be supposed. When it is used the patient should be kept in bed. Adonidin and chloride of barium have been of good service at times; cactus and convalaria have been disappointing. Caffiene and cocaine are both valuable, but their action cannot be kept up; from cocaine there is the danger of establishing the cocaine habit. It is, however, very serviceable during urgent symptoms of failing heart. Nitroglycerin is not of much avail, except there be cardiac pain, or in combination with remedies like digitalis, which act more distinctly on the force of the heart. Bromides, valerian, and opium ought to be left to meet certain special indications of nervous disturbance.

In the paper is the report of several cases of this interesting condition observed by the author.

Dr. Charles W. Allen contributes a paper on

Syphilis of the Epididymis.

The epididymis, according to the author's observations, is capable of suffering by itself, and not infrequently is affected independently of the testis proper, not only in the early consecutive period of syphilis, but in all stages of the disease and sometimes quite late. In what is termed commonly syphilitic testicle, the epididymis is affected in perhaps one-third of the cases, and the possibility of the organ remaining enlarged after a mild grade of orchitis which has disappeared should be remembered to obviate a possible source of error in diagnosis. The early diffuse syphilis of the epididymis, or syphilitic epididymitis proper, is usually confined to the globus major, though cases have been reported in which the tail alone has been inflamed, and often the body suffers too. The enlargement may be either rounded or irregularly square or angular, and often not much larger than an American chestnut. There appears to be a decided tendency for both epididymes to suffer coincidently or one after the other. If other diagnostic features are not sufficient, the fact that the infiltration entirely and quite promptly disappears under anti-syphilitic treatment makes its nature clear. Sequellæ are usually absent, while after gonorrhœal epididymitis fibrious remains are apt to show themselves for a long time, especially about the tail.

The author cautions however, that a slight improvement under the iodides must not have too much weight given to it, as the same temporary improvement may take place in tuberculosis of the epididymis. Where fibrous changes have taken place we cannot hope for a return to normal form and size; and when pressure has been exerted, surrounding, and perhaps parenchymatous deposits may result; but, aside from such changes, the iodides should affect a cure.

Several cases are reported by the author.

William Thomas Corlett, M. D., L. R. C. P., Lond., discusses

Pemphigus:

its clinical varieties and treatment. In the treatment he states that he has never observed the slightest benefit from arsenic and he is forced to the conclusion that as yet we have no trustworthy specific for pemphigus. The internal treatment should be conducted along the lines of general therapeutics. Food should be selected which is easily digested, although possessing the proper elements for proper nutrition, such as milk, eggs, &c. In pemphigus, above all diseases, tonics are indicated. Iron and arsenic, the latter in small tonic doses, and, in selected cases, cod-liver oil, will afford the best means at command. Locally the general hygienic environment should be looked after, fresh air and sunlight should never be forgotten, and, in an epidemic, isolation and disinfection, such as recommended for smallpox and erysipelas. Then the blebs should be punctured and the sac washed out with some bland disinfectant, such as the saturated solution of boric acid. This is followed by some application of a bland, soothing nature. The author finds the continuous water bath in use in Germany, of great service but difficult of application in private practice. Of lotions, the glycerole of tannin has given the most marked benefit. It may be used in the strength of one part of the glycerole of tannin to three of distilled hamamelis or water. This strength may be increased to equal parts of the glycerole of tannin and camphor-water. When the eruption is limited to small areas, the glycerole of the subacetate of lead and glycerine, of each one ounce added to a pint of water, often acts admirably. When itching is present resorcin or carbolic acid are the best agents we possess for allaying it. These are used in the form of lotions, one drachm to four ounces of water. Sometimes cloths saturated with a bland oil prove most grateful to the patient. During convalescence, especially in the exfoliative form, some emollient, such as vaseline or the benzoated zinc ointment, is to be recommended.

Dr. George Dock writes of

Pernicious Malarial Fever,

reporting a fatal case. The parasites encountered in this case seem to be identical with those described by Marchiafava and Celli as the small plasmodium, or the parasite of summer and autumn in Rome. They agree, so far as one can determine by descriptions and without actual comparisons, in the size of the fully developed organism, their short cycle (about twenty-four hours), their lively motion, and the peculiarities of the spore figure and of the pigment. The growth of the parasites was checked almost completely very soon after the patient's death. The author cannot say whether this was due to lack of oxygen or to altered temperature, or to other causes.

The paper is illustrated with half-tone cuts of the microscopical appearances of the blood and splenic juice.

John Croft, F.R.C.S., England, contributes a paper on

The Mortality after Operations for Strangulated Hernia; the Treatment of Gangrenous Intestine, and the Radical Cure of Hernia.

In his own experience the mortality of the operation has been reduced from 50 per cent. in pre-antiseptic times to 29½ per cent. at present. The author discusses the questions of artificial anus, and primary resection and suture, deciding that no hard and fast rule can govern these cases, but each must be decided on its own merits. In regard to removing the omentum in cases of strangulated hernia, the author believes it wiser to cut off the omentum antiseptically than to run the risk of bruising it and even tearing it by pushing it back through a relatively narrow orifice. When in doubt, remove it antiseptically is a good rule.

In answer to the question as to whether a radical cure should be attempted in operations for radical hernia, he says that all patients suffering from strangulated hernia should be given the advantage of a radical cure; and he goes farther and says that all patients suffering from obstructed hernia should be advised to submit to early operation and radical cure. He attaches great importance to placing the ligature high up on the neck of the sac. In many cases of inguinal hernia he fastened one end of the sac-ligatures to the internal oblique and inner pillar of the ring, but he doubts the value of it. In almost all instances of inguinal hernia he brought together the pillars of the ring by sutures, at the same time avoiding any pressure on the constituents of the spermatic cord. For sutures he gives the preference to silk as more durable and reliable.

The remaining papers in this issue are: "A Case of Non-hereditary Friedreich's Disease," by Hector W. G. Mackenzie, M.A., M.D.

"A Case of Tuberculosis of the Skin Simulating Lupus Erythematosus and Erythematoid Lupus Vulgaris," by W. A. Hardaway, M.D.

"A Case of Locomotor Ataxia Beginning in the Arms," by J. K. Mitchell, M.D.

"A Case of Fracture and Dislocation of the Second Lumbar Vertebra, with Operation," by Richard C. Newton, M.D. The patient died five and one-half days after operation. Dr. Henry Power presents a report of the microscopical examination of the spinal cord.

PERISCOPE.

IN CHARGE OF WM. E. PARKE, A.M., M. D.

THERAPEUTICS.

A New Anti-Neuralgic and Anti-Rheumatic.

In an article in the *Deut. Med. Woch.*, No. 18, 1893, Dr. Edmund Koch writes as follows: "All reports speak in satisfactory terms regarding the prompt action obtained with Salophen in acute articular rheumatism. In doses of three to five grains or at most six grains per day it rapidly diminished the fever pains and swelling; and in laudatory terms it is pointed out that in this affection it has the same action as Salicylate of Soda and Salol, but it is preferable to them on account of its agreeable taste and the absence of disagreeable after effects. In older cases, as well as those which have become chronic and have persisted for many years, and in the arthritis deformans it is frequently ineffective, but may be alternated with advantage with other remedies the more so since it sometimes relieves the pains at least the beginning. The dose here varies from 4 to 6 grms per day. The chief domain of Salophen, however, is the large field of nervous diseases of every kind; neuralgias, such as sciatica, pleurodynia, intercostal neuralgia, neuritis, hemicrania, and odontalgias as well as other painful affections. In mild cases, a dose of 0.75 grms is effective; in the more severe, larger doses up to 3 or 4 grms must of course be employed. Only a few cases of nervous diseases fail to yield to this treatment.

The remedy is best administered in the form of powder in doses of 0.75 grms. Owing to its tastelessness it is readily taken in doses of 3 to 5 grms, which are amply sufficient. It is devoid of any after effects.

Pental.

Phillip (*Zeitshrift f. Kinderheilk.*, Bd. iii., 4 1893) states that during the preceding twelve months chloroform and pental were the only anæsthetics used in the Kaiser Fredrich Chil-

dren's hospital, Berlin, local anodynes having been found impracticable in the case of children. The following were found to be the principal advantages of pental: Extraordinarily rapid narcosis; rarity of a period of excitement, which, if present, ceased with absolute narcosis; immediate recovery of consciousness after removal of the mass; and absence of any unpleasant after-effects such as are caused by chloroform. No action on the heart was ever observed, but in some patients arrest of respiration and cyanosis occasionally appeared, when removal of the mask sufficed to restore the natural color. The author attributes the cyanosis, not to any toxic action on the respiratory centre, but to tonic contraction of the diaphram and glottis. In twenty-one cases the urine was subsequently examined for albumin, but not only was a trace found, which disappeared on the third day; this occurred in a tuberculous child after a prolonged operation. The majority of the operations lasted from ten to thirty minutes, from thirty to sixty cubic centimetres of pental being required. In conclusion, judging by one thousand narcoses, pental is, with certain exceptions, always able to replace chloroform, being, moreover, less dangerous and without after effects. In the above-named hospital pental is now looked upon as an indispensable drug, but during its use all precautions should be taken as when administering chloroform.—*British Medical Journal*, February 17, 1894.

MEDICINE

Etiology of Bronchitis.

Marfan and Claisse (*Boston Medical and Surgical Journal*) place bronchitis among the germ diseases. They claim that by the sudden chilling of the cutaneous surface, and especially when the body has been overheated and is perspiring, the blood is chilled and carried to the internal organs, causing such changes that the microbes which commonly infest the upper air passages and bronchi find a favorable condition for their multiplication and pathological operations. Under ordinary conditions the leucocytes are able to control the invading hosts, but the congestion (plus something else as yet not understood) produced by the sudden chilling of the surface places the organism in a state of lessened resistance, and the enemy enters and possesses the country for a period varying from two to five weeks.—*Amer. Pract. and News.*

Ergot in The Treatment of Periodical Neuralgias.

Dr. William H. Thompson read a paper on this subject, in which he gave the histories of a number of cases of severe periodical neuralgias in which the symptoms had been promptly relieved by the use of ergot in large doses. In all of these cases the disease had been of long standing, and the usual remedies had been employed without avail. Dr. Thompson said his method of administering the ergot in migraine was as follows: The fluid extract of the drug was employed, combined with an equal quanity of elixir of cinchona, to obviate the tendency to cause nausea. Two drachms of this mixture were to be taken in water as soon as the premonitory symptoms of the headache were noticed, and the patient was advised to lie down and keep very quiet. If, after an hour, the headache continued, a second similar dose was taken, and then a third in another hour if necessary. As nausea was such a general accompaniment of this affection, it was provided that if either of the doses be vomited it should then be taken in an enema of two ounces of water. This medication, the speaker said, rarely failed to arrest the attacks, even in long-standing cases, and with a preventive course of intestinal antisepsis in the intervals.—*N. Y. Med. Jour.*

The Therapeutics of Oxygen.

Dr. A. W. Catlin, of Brooklyn, read a paper in which he stated that the therapeutic use of oxygen was of very recent date. The treatment of disease by natural means was proving more and more efficacious as experience increased. Oxygen was a distinct remedial agent—one that should not be left untried until the patient was *in extremis*. It was the surest and most satisfactory stimulant that we possessed, and was applicable to many conditions. In profound shock, from whatever cause, it had been found to exercise a reviving effect. It was taken up quickly by the blood, but its chief value was in its effect upon the nerve centers, upon which it exercised a quieting and soothing effect. In hemorrhage from typhoid fever he had seen relief in many cases. It would produce sleep, favor assimilation, and shorten the period of convalescence of typhoid fever. No agent was so well tolerated or so useful in restoring the equipoise of the physical condition. In cases of childbirth, pneumonia, bronchitis, and other exhausting diseases, the use of oxygen was indicated, and it should not be given late but early.—*N. Y. Med. Jour.*

The Treatment of Pregnancy Complicated by Heart Disease.

Dr. Geo. G. Sears in a paper upon this subject summarizes his conclusions as follows:

1. That many women with valvular disease, even when situated at the mitral orifice, pass through repeated pregnancies without the development of serious symptoms, and at times without suspecting that they are victims of such disease.

2. That as miscarriages are very frequent, and the chances of the child's surviving more than a few years are doubtful, if the mother's condition during pregnancy has been serious, the probable fate of the latter should take so much more prominence in deciding the question of abortion.

3. That the necessity of inducing abortion is very probable if grave symptoms have appeared during the early months, or are present with an advancing lesion, or if there is a

history of extreme danger in the preceding pregnancy.

4. That if the necessity for an abortion becomes apparent, the sooner it is done the better, while the fetus is still small and the expulsive force chiefly furnished by the uterus.

5. That the hope that relief may be given when the case has become desperate by inducing abortion is delusive, as it is possible that it only increases the danger.

6. That marriage should be forbidden except, perhaps, in very unusual cases, to women suffering from cardiac disease—*Boston Med. and Surg. Jour.*

On the use of Antiseptics in the Treatment of Typhoid Fever.

Dr. E. N. Nason, in a paper read before the Birmingham branch of the British Medical Association under the above caption states that the ideal antiseptic in typhoid fever which has yet to be discovered must fulfil the following conditions.

1. It must be innocuous to the patient.
2. It must be destructive of micro-organismal action, without interfering with the normal digestive ferments.
3. It must reach the small intestine while
4. It must be capable of absorption from the intestines, and not a completely insoluble substance.

still operative.

He employes as an antiseptic a preparation which he calls chlorinated quinine, and which is prepared in the following way as suggested by Dr. Burney Yeo:

Into a 12-oz. bottle place about 30 grs. of chlorate of potassum, and upon this pour 40 grains of strong hydrochloric acid. A yellowish-green gas is given off, which should be allowed to accummulate in the bottle, then add water, an ounce or so at a time, shaking well as the water is added. The gas dissolves in water forming a yellowish-green solution and smelling strongly of chlorine. This solution contains free chlorine, peroxide of chlorine, protoxile of chlorine, and some unde-composed chlorate of potassium. To this is added 24 grs. of quinine, and a little syrup of orange. The mixture should be kept in a cool, dark place as it decomposes under the influence of a bright light. An ounce of this should be given every 3 or 4 hours to an adult, for children a proportionately small dose. While not contending that this particular mixture is necessarily the best the form of antiseptic to be used, he recommends it, and claims the following advantages over the expectant method from its use.

First those which may be constantly expected:

1. Reduction of temperature to a greater or less extent.
2. Improvement in condition of tongue and mouth.
3. Reduction of fetor of stools.
4. Improvement in general appearance and condition, with a greater sense of well being, and less hebetude.
5. Prevention of excessive fermentation or putrefactive changes in intestine with consequent tympanites.

Second those occuring with greater frequency than ordinarily:

1. Abortive attacks.
2. Freedom from complications.
3. Shortened febrile period.
4. More rapid convalescence.
5. Low mortality.

ARMY AND NAVY.

U. S. ARMY FROM APRIL 1, 1894, TO APRIL 7, 1894.

Captain Edward C. Carter, Assistant Surgeon, will proceed at once to Fort Spokane, Washington, and report to the commanding officer for temporary duty.

Leave of absence for twenty-one (21) days, to take effect on or about April 14, 1894, is granted Major Charles L. Heizmann, Surgeon U. S. Army.

The following named officers are detailed to represent the Medical Department of the Army as delegates to the Association of Military Surgeons of the United States, to meet in Washington, May 1, 1894: Lieut. Col. William H. Forwood, Deputy Surgeon General; Major Robert M. O'Reilly, Surgeon; Major Joseph K. Corson, Surgeon; Major Walter Reed, Surgeon; Captain John L. Phillips, Assistant Surgeon; Captain G. L. Edie, Assistant Surgeon.

First Lieut. Henry D. Snyder, Assistant Surgeon, is relieved from duty at Fort Reno, Oklahoma Territory, and ordered to Fort Du Cbesne, Utah, for duty at post, relieving Captain Samuel Q. Robinson, Assistant Surgeon.

Captain Robinson, on being relieved by Lieutenant Snyder, will report in person to the commanding Officer, David's Island, New York, for duty at that post.

Major Peter J. A. Cleary, Surgeon, will be relieved from duty at Fort McPherson, Georgia, by the commanding officer of that post, on the receipt by him of this order, and will report in person to the commanding officer, Fort Custer, Montana, for duty at that post.

First Lieut. Edward L. Munson, Assistant Surgeon, will proceed without delay to Camp Merritt, Montana, and report to the commanding officer, for temporary duty at that post.

First Lieut. Charles F. Kieffer, Assistant Surgeon, having reported at Headquarters Dept. Dakota, is assigned to temporary duty at St. Paul, Minn., and will report to the Medical Director of the Department for instructions.